



**Research Protocol - Exploring Menstrual Hygiene Management (MHM) Systems, Practices and Perceptions in Selected MSF Health Structures: A Mixed Method Study**

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# Exploring Menstrual Hygiene Management (MHM) Systems, Practices and Perceptions in Selected MSF Health Structures: A Mixed Method Study

**RESEARCH PROTOCOL**

Version 6.0

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## 1. Acronyms

FGD	Focus group discussion
IDI	In-depth interview
IPC	Infection prevention and control
IRC	International Rescue Committee
MoH	Ministry of Health
MHM	Menstrual hygiene management
MSF	Médecins Sans Frontières
MTL	Medical Team Leader
MSF-OCA	Médecins Sans Frontières Operational Centre Amsterdam
NGO	Non-Governmental Organisation
PC	Project Coordinator
PI	Principle Investigator
WatSan	Water, sanitation and hygiene
WHO	World Health Organisation

## 2. Project information

<b>Draft</b>	30 <sup>th</sup> April 2019
<b>Revisions</b>	Version 6
<b>Study design</b>	Mixed Methods Study
<b>Research question</b>	<i>“To what extent are the existing sanitation and hygiene services appropriate to women using MSF health structures?”</i>
<b>Proposed start date of data collection for study</b>	To be confirmed.
<b>Study sites</b>	Three MSF-OCA missions (specific contexts TBC)
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<b>Field research assistants</b>	TBC
<b>Data collection and analysis responsible</b>	MSF-OCA

### 3. Background

Safe, dignified and effective menstrual hygiene management (MHM) requires a water supply, a private space, soap for washing and cleaning the body and hands, material for absorbing menstrual blood and facilities for proper disposal of used materials (or for washing and drying reusable materials) (1). Although women comprise 50% or more of water and sanitation (WatSan) service users, their needs relating to menstruation have largely been ignored by the humanitarian sector (and more broadly in global health). In addition, women are usually excluded from decision making in relief programmes (1,2). Even amongst WatSan professionals used to dealing with human waste, MHM is an extensively stigmatised subject (3-5). This is compounded by negative community attitudes, social taboos and other cultural sensitivities. As a result, the easier to address or visible needs in WatSan tend to be prioritised over MHM.

Recently, the idea of gender equity in WatSan has received more recognition. For the most part this is by individuals and NGOs who have spent time and energy advocating and developing guidelines for MHM (2,6), emphasising the importance for infection prevention and control (7), psycho-social well-being, and prevention of sexual violence against women. Further attention has been provoked through the environmental impact of improper disposal of pads and cloths, since this can result in solid waste build up, blocking pits and latrines to affect the sustainability of WatSan programmes (2). MHM programmes have been proposed and implemented in schools as a means of improving the health and education outcomes for school girls (for example, 2,8-12).

In 2015, a tool was developed by Médecins Sans Frontières (MSF) as a step-by-step guide to facilitate the design and construction of gender-specific WatSan facilities in emergency settings, bypassing the lengthy consultation processes typically adopted when establishing design criteria. “The Gender & Sanitation Tool” addresses specific gender concerns, including the provision of a private area for women to manage menstruation, sufficient space for caring for children and increased security to reduce the risk of gender-based violence (6). Following on from this study, a tool specifically designed to implement effective MHM was developed from research conducted in an MSF-run health structure in Bangladesh (13). This was designed to complement the current essential requirements for WatSan in MSF health structures, with the aim of enabling the integration of MHM. It was concluded that further research should be conducted in different health structure types and cultural contexts to better understand the perception and practices around MHM, and ensure universal applicability of the tool within all MSF health structures.

More recently, a toolkit for MHM in emergency contexts was developed by a collaborative group from Columbia University and the International Rescue Committee (IRC). This has been designed to provide organisations and agencies involved in emergency response with the capacity to integrate MHM into existing and future programmatic activities (14). Whilst this is a promising addition to the global gender-specific WatSan agenda, guidelines addressing specific problems affecting menstruating women and girls in health structures are lacking.

The proposed “WHO post-2015 WASH Targets and Indicators for Health Facilities” do include an element of MHM, which may suggest a change in attitude by the public health community towards the importance of integrating MHM into WatSan standards for health facilities (15). This is yet to be reflected in Médecins Sans Frontières, Operational Centre Amsterdam (MSF-OCA) WatSan policy. Up to date WatSan provision in MSF health facilities has largely been centred on preventing the spread of nosocomial infection amongst staff and patients (16-18).

## 4. Rationale for the proposed study

Social acceptance is essential to ensuring appropriate use of WatSan facilities and services, yet given the lack of knowledge amongst women and girls in low-income settings of what menstruation is, and means from a biological perspective (8,19), this presents a persistent challenge. In addition, voices of the women expected to use menstrual hygiene facilities are largely absent from any discussion of what is required, and what should be assembled to best suit their needs. As a result, the quality and sufficiency of gender-specific sanitation and hygiene facilities in MSF-OCA health structures fall short.

A deeper understanding of the knowledge, attitudes and practice of women with regards to menstrual hygiene management is important to increase uptake and effectiveness of gender-specific WatSan facilities in health structures:

- What is known and understood about menstrual health amongst women and girls?
- What are the main barriers preventing women and girls from properly managing their menstruation in health structures?
- What do women and girls currently do and use to manage menstruation in health structures?
- What roles do men play in decision making around MHM practices in the household?

In addressing these questions, this study aims to describe the scope of MHM knowledge, perceptions and practices in MSF health structures, and define the key requirements for an informative and effective system for implementing best practice amongst staff, patients and caretakers in these settings. Furthermore, the study provides an opportunity to improve knowledge and awareness for women and girls attending health structures, and help explain attitudes influenced by specific cultural beliefs.

## 5. Objectives and expected outcomes

### 5.1. Key objective

To establish the degree to which sanitation and hygiene facilities at MSF health structures meet the requirements of menstruating women.

### 5.2. Secondary objectives

1. To understand and describe attitudes, behaviour and knowledge around MHM
2. To identify gaps and barriers contributing to poor MHM in health structures
3. To ascertain preferences of hygiene materials

### 5.3. Expected outcomes

In line with the objectives, expected outcomes are as follows:

- Improved infrastructure and service provision for MHM in the health structures where the study is conducted, as recommendations may be implemented immediately
- Understanding of preference for reusable or single use MHM materials to ensure that appropriate facilities are in place for washing and drying, or disposal
- Information generated to facilitate the development of guidelines and a geographically generalisable toolkit for MHM in MSF health structures following completion of the study



- Improved knowledge of women and girls attending the health structure to help facilitate good MHM practice

## 6. Methods

### 6.1. Study area and population

The study will be conducted in health facilities of MSF-OCA projects in three different missions. The proposed study locations will be in Ethiopia, Pakistan and the Democratic Republic of the Congo (DRC). For planning and coordination purposes, each project will require more concrete confirmation that the study will take place as we propose. Therefore, this protocol is submitted as generic. Supplement protocols will be developed in each context, paying particular attention to sections: 3; 6.1; 7; 8 and 9.1. These will be resubmitted to both the MSF Ethical Review Board, and local ERB for review and approval once details related to the specific study sites and target populations have been established.

For the purpose of this study, a health structure is defined as a medical facility either partially or entirely supported by MSF, providing impartial treatment and care to the population. Health structures included in this study will range in size, from smaller health centres to hospitals entirely under the management of MSF, with the condition that there are beds for inpatients. Depending on the confirmed study site, the target health structure may be situated in an urban or rural setting.

### 6.2. Study Design

The study will be conducted in three stages (with stages two and three replicated across each study site):

#### Stage 1

This stage will provide the context for the study.

- a) A systematic literature review to gain an understanding of the outcomes of previous research that has been conducted about MHM in a health structure context. The review explores current thinking around MHM, and provides an overview of the literature available and the main themes addressed.
- b) Desk-based document review of the content of existing tools to answer the following questions:
  - What tools already exists for MHM?
  - What aspects of existing tools would be relevant to incorporate into the final guidelines and toolkit produced from this study?

#### Stage 2

A multistage mixed method, participatory framework will be applied to measure and explore criteria for effective MHM in health structures using quantitative and qualitative techniques:

- a) Pre-exploratory qualitative research (section 6.3)
  - Focus Group discussion (FGDs)
  - Observation and field notes
- b) Quantitative research (section 6.4)
  - Questionnaire

c) Post-exploratory qualitative research (section 6.3)

- In-depth interviews (IDIs)
- Observation and field notes

Focus group discussions (FGDs) (annexes A-B) will be conducted during the pre-exploratory qualitative component (stage 2a). The study will initially follow an exploratory sequential design, whereby results from FGDs may influence the way that data is collected during the quantitative component (stage 2b). Findings from FGDs will be reviewed, and response categories from the 16 item quantitative questionnaire (annexes D-G) refined where necessary. Key concepts from the qualitative data will inform for example: language, context and subject items detailed in the survey (20, 21). The subsequent in-depth interview questions (annexes H-J) consist of individualized topics intended to explore particularly interesting or ambiguous survey responses as well as standard exploration of general perspectives on MHM.

Stage 2a will address the Key Objective (section 5.1), in addition to Secondary Objective 1 (section 5.2). Following refinement, the questionnaire conducted as Stage 2b will address the Key Objective, and Secondary Objectives 1 and 3. The IDIs conducted as Stage 2c will address any unanswered questions relating to the Key Objective, and Secondary Objective 2.

### **Stage 3**

An observational hardware assessment (annex C) will be conducted at each of the study sites to gain an understanding of the state and existence of sanitation and hygiene facilities, and how they might be improved to better suit the needs of women. It will also help to highlight any gaps in service provision which may be currently influencing the hygiene behaviour of menstruating women and girls at the health structure.

This stage will primarily address Secondary Objective 2 (section 5.2).

## **6.3. Qualitative Research**

### **6.3.1. Focus group discussions**

Focus group discussions (FGD) will be conducted to provide an opportunity to observe the dynamics and interactions between participants as they share viewpoints and experiences with regards to MHM, and collectively identify the most relevant problems with gender-specific sanitation and hygiene facilities in the health structure. The FGD will occur prior to the survey to test pre-existing ideas and adapt questions, terms and probes for the subsequent survey questions.

#### **Focus group discussion topic guide**

A FGD topic guide (annexes A and B) has been designed to set the context for a discussion and to provide flexibility for participants to steer it towards priority subjects. The number of questions in the topic guide will be kept to a minimum to allow sufficient time for participants to discuss the subject matter thoroughly, sharing personal experiences and opinions (22).

#### **Sampling, sample size and inclusion criteria**

Three FGDs (nine in total across the three study sites) consisting of approximately six participants in each group will be conducted per health structure. This group size should be large enough to

encourage the women to talk openly without feeling pressured or victimised (23), but small enough to provide each participant with an opportunity to share their personal opinions, experiences and observations in more depth (24). In addition, recruiting for a larger number of group participants may pose a challenge when sampling from smaller health structures, particularly with regards to selecting groups of staff members without disrupting medical service delivery.

Participants for the FGDs will be selected based on the study objective of improving MHM systems in MSF health structures for everyone requiring access to them. Two of the groups will comprise of female patients and caretakers of reproductive age (15y-45y), and the third with female staff members who agree to take part in the study. Staff participation will be discussed with a designated gatekeeper within the project such as the Project Coordinator (PC) or Medical Team Lead (MTL), and Health Promotion team to ensure health care delivery is not hampered. Participants for the FGDs will be selected through purposive and snowball sampling.

### Pre-testing

Each FGD will be led by a trained research assistant supported by the project PI using a topic guide (annexes A and B). The FGD questions will be tested with a group of 4-6 female MSF national staff during research team training. This group will be selected with assistance and permission from relevant project supervisors, but it will be made clear to each participant that their contribution is not obligatory. The pre-test process should highlight any practical problems with the FGD topic guide and data collection methodology, as well as help to ensure that all components are understood, and that respondents are willing to answer all questions (25, 26). It is assumed that members of MSF national staff who are already known to the research team will more readily and honestly provide feedback about any ambiguity or misunderstanding of questions. Following an initial revision of the topic guide, a pre-test FGD will be conducted with a convenience sample of 4-6 women from the local community. The research assistant and PI will review the FGD questions based on findings from both pre-test, and make changes where it is deemed necessary. The structure and content will be reviewed and refined throughout the process of data collection.

### Data collection

Time will be taken before commencing discussion to introduce participants and all MSF facilitators present, in addition to providing an overview of the work of MSF more generally. It is anticipated that each FGD will take approximately 45-60 mins. The purpose of the research will be explained clearly in the relevant local language by the research assistant, and participants told that they may leave the group at any time if they feel uncomfortable and no longer wish to contribute to discussion. Details regarding informed consent and confidentiality are outlined in section 6.7, with participant verbal consent information sheets provided in annex K, sections 11.10.1 – 11.10.13 (27).

Discussions will be recorded using a handheld recording device or mobile phone with voice recording capability. This process and the rationale will be explained to participants in advance of requesting their consent, and they will once again be reminded of the opportunity to leave the group if they feel uncomfortable. Group participants will be encouraged to keep confidential what they hear during discussion, and be reassured that data from the group will be anonymised using pseudonyms.

Following data collection, conversations will be transcribed verbatim in the local language spoken, and translated in English word for word indicating idioms where relevant by two locally hired, trained translators. All translations will be checked through back translation technique.

#### 6.3.2. In-depth interviews (IDIs)

Following the quantitative research component, IDIs will be conducted privately with women in each health structure, and men in the local community to gain an understanding of the knowledge, attitudes and behaviours around menstrual health and MHM. Open questions will allow participants to direct the discussion towards those subjects most pertinent to them, and help the researcher to understand the main challenges and priorities with regards to MHM both at home, and in the health structure setting.

### Interview topic guide

An interview topic guide (annexes H-J) has been designed for each target group: female staff, patients and caretakers of reproductive age, and men sampled from the local community who consent to participation. This topic guide creates conversational structure between researcher and participant, devised in such a way to emphasise the agenda of the interviewee (28). Broad initial questions will be posed to draw out responses, with further prompts or elaboration questions asked dependent on the flow of ideas specific and apparently important to each participant. Adaptations will be made to the interview style as the responses dictate. The skill required to listen and be aware of instances where the interview is 'off focus' so that the conversation can be 'nudged into the frame of reference', is essential, (29).

### Pre-testing

With the aim of improving respondent cooperation, the interview questions will be tested during research team training to ensure that all components are understood, and questions are phrased appropriately (30). In the first instance, this will involve individual pre-test IDIs with two male and two female MSF national staff members, selected with permission and assistance from the relevant MSF supervisors. Similar to the FGDs, it is anticipated that MSF staff members who are known to and comfortable with the research team will more readily and honestly provide feedback on question ambiguity or misunderstanding. Following any alterations to the interview topic guide, pre-test IDIs will be conducted with two women identified through convenience sampling from the health structure and two men identified through convenience sampling from the local community, providing a sample more representative of the target population with which to test the interview questions. This pre-test will also allow the research assistants the opportunity to familiarise themselves with the interview questions and questioning style. Pre-tests will be recorded using a hand-held recording device, but collected, anonymised data will only be used for training of the research team, and to ensure validity and internal consistency of the IDI topic guide. Following this review, the data will be removed and destroyed.

### Sampling, sample size and inclusion criteria

12 IDIs will be conducted per target group (or until saturation is reached (31, 32)). Interview subjects will comprise of female staff, patients and caretakers of reproductive age (15y-45y), in addition to male members of the local community with access to the health structure who consent to participation.

A multivariate selection across a range of ages, ethnicity or status will be made. Participants will be selected through both purposive and snowball sampling, allowing the researcher to actively select participants most likely to provide useful information on attitudes toward menstruation, and MHM behaviours within the health structure setting. The snowball technique will be applied, whereby identified subjects may recommend potential participants. This process allows for a discreet approach to finding people willing to take part.

Staff members from a range of roles within the health facility will be selected through consultation with a designated gate keeper within the project, for example the MTL or hospital facility manager. This will avoid disruption to regular service delivery.

Male participants will be selected from the local community using a convenience sampling approach. This selection will be conducted by the research assistant accompanied by the PI.)

The design of the study does not connect sampling, and as such, participants in the survey (stage 2b) will not be purposively selected.

### Data collection

IDIs will take place in private locations, convenient for all groups. For the female participants, this will be in specific rooms or meeting areas within or around the health structure. For men sampled from the community, this will likely be in or just outside of their homes. IDIs will be conducted by the research assistant in the relevant local language, supported by the PI. Questions will be participant led (annexes H-J), providing flexibility to direct the conversation towards specific priority issues.

Prior to requesting consent, it will be made clear to all participants that their involvement will be kept confidential, with any collected data anonymised using pseudonyms. In addition, participants will be informed that their involvement is voluntary and confidential, and that they may stop the interview at any time. It is anticipated that each interview and pre-test will take approximately 30-45 mins. IDIs and pre-tests will be recorded using a hand-held recording device or mobile phone with voice recording capability. This process and the rationale will be explained to participants in advance, who will be reminded that they may withdraw consent from participating in the interview at any time.

Details regarding informed consent and confidentiality are outlined in section 6.7, with participant information sheets provided in annex K, sections 11.10.1 – 11.10.13 (27).

As with the FGDs, conversations will be transcribed verbatim in the local language spoken and translated in English word for word indicating idioms where relevant by a locally hired, trained translator, supported by the research assistants. All translations will be checked through a back translation technique.

### Data entry and analysis

The process of analysis will begin the moment that data collection starts. For FGDs, specific data that relates to use of terms or language will be sorted and coded to establish themes that may inform survey questions. All anonymised transcripts will be analysed using Nvivo 12© software to help organise the data. A thematic approach will be applied to identify patterns and relationships, allowing data to be grouped according to themes, as categories for analysis. Constant comparison amongst interview and focus group data will be applied to establish where themes converge or are different. Selected anonymised case studies and quotes will be drawn out to ensure that individual 'stories' are not lost and to explore how the themes interrelate in particular cases. The researchers will document additional insights and observations of events, activities and interactions, such as body language and interview dynamics, reluctance to answer questions etc. This will provide an enhanced understanding of the data, and increase validity of the results by highlighting any discrepancies between what people say, and how they behave.

A subset of data in addition to a coding dictionary will be analysed by a second researcher to ensure consistency, enhance reliability and analytical credibility from cross checking. Deviant or negative

cases will be compared to test emerging theories and question why any differences may exist to avoid selection to confirm desirable outcomes.

## 6.4. Quantitative Research

### 6.4.1. Survey

A survey (annexes D-G) will be conducted amongst patients, staff and caretakers within MSF health facilities to gain a general, objective understanding of opinions, challenges and priorities towards MHM. This will take place following focus group discussions – the details of which as previously outlined. Prior to commencing the survey, the research assistant and PI will review findings from the FGDs and identify necessary changes to be made to phrasing of survey questions, or focus, if certain themes emerge more frequently during FGDs, and seem to be of higher relative importance to the target population. The questionnaires will be translated into the contextually relevant language, and back translated into English to ensure consistency of language and concepts.

#### Target groups

Surveys will be conducted with the following groups:

- Female patients and caretakers: *inpatient department*

The target beneficiaries for this project are patients and their caretakers. We anticipate this group combined representing the largest demographic of the population of each health structure, and thus require the most regular access to MHM facilities. Patients and caretakers will be sampled from inpatient departments where women remain at the health structure for longer, and are therefore more likely to have menstruated and require access to appropriate MHM facilities. The survey can be viewed as annex D.

- Female patients and caretakers: *outpatient department*

Women from outpatient departments will be sampled as a separate subgroup, although questionnaire format and content will be the same as for the inpatient group (annex D).

- Female staff members

Female staff members will need to be aware of the structures and services available for their patients who may be incapacitated, thus unable to access MHM facilities independently whilst menstruating. Female staff members will be sampled from medical departments, cleaning and maintenance teams. Health facility cleaners will have good oversight of situations regarding, for example, the disposal of menstrual materials. The survey may be viewed as annex E. This study is not addressing MHM facilities available for female staff members at the health structure.

- Male staff members

It is important to include a sample of men in the target demographic to further understand the level of understanding of the needs of menstruating women and girls, and any opinions which might present hurdles to women in their access to MHM materials and services. Male staff members will be sampled from medical, logistics (to include those working specifically in WatSan) and maintenance functions. The survey may be viewed as annex F.

- Male patients and caretakers

Men from inpatient and outpatient departments will be included in the sampling, although we anticipate that this group will represent the smallest demographic in each health facility, thus posing a challenge to participant recruitment. The survey may be viewed as annex G.

### Sample size, sampling strategy and eligibility criteria

The sample size for each of the female inpatient and outpatient groups will be 50 individuals (maximum) unless the number identified as available for interview is lower (i.e. a female inpatient ward with 20 beds, only 20 interviews will be possible). For each of the female staff, male staff and male patients and caretakers groups, the sample size will be 25 individuals. Thus in total, we will conduct 100 interviews with female patients, and 75 interviews combined with female staff, male staff, male patients and caretakers. Sample sizes for the survey have been estimated on what we would expect to see in a realistic outpatient and inpatient department in MSF field hospitals. As sampling will be done in a systematic fashion in outpatient departments and inpatient departments, it is felt that these estimate numbers provide for the least invasive way to obtain quantitative data of value through convenience and thus less disruptive to clinic and hospital functioning.

For inpatient wards, one patient and one caretaker will be selected alternately from each bed/ bedside until the target number of participants is surveyed. If a patient is unable to participate, a caretaker will be selected in their place. In the event that the inpatient ward is small and we achieve fewer than 15 surveys in both the patient and caretaker groups, we will conduct an exhaustive sample of the inpatient ward so that all beds will have surveys conducted with caretakers and patients in order to increase our sample size.

For outpatient departments, female participants will be identified through systematic sampling. Individuals will be selected from the pool of day patients and those accompanying them to the health structure, although the sampling frequency will be based on the number of patients seen by the outpatient department each day. Female patients and caretakers will be selected for sampling if they have experienced their first menses, they consent to inclusion in the study and are considered by MSF medical staff as being in well-enough health to participate. Asking potential participants whether they have experienced their first menses may be a question which women are hesitant to respond to. In order to ensure that this is carried out in a respectful and confidential way, the question will be posed by a female staff member familiar to the individual (for example, the nurse responsible for the ward). This process will be supported by the PI and research assistant, who will ensure that there are no other people listening in to the conversation, so that qualifying questions and responses are not overheard. Male participants will initially be selected by exhaustive sampling of patients and caretakers in non-paediatric inpatient wards, with any shortfall being made up by additional participants selected from those attending outpatient departments. All consenting adult males will be included in the sampling, unless considered by MSF medical staff as too unwell to participate.

Health facility staff will be grouped across the wards according to function: medical, logistics/ WatSan and janitorial, separating male and female staff members. Participants will be selected after consultation with the relevant gatekeeper and health facility coordination team to ensure that there are no interruptions in work schedules. Equal numbers of participants will initially be sampled from each function. Any shortfall in sample numbers of from each function will be made up by additional participants selected from the pool of staff members of other functions. All consenting male and female staff members will be included in the sampling if they are given permission by their supervisor to take part in the research.

### Pre-testing

Given that the questionnaire will be adapted based on findings from the FGDs, pre-testing will take place to ensure validity and internal consistency of the research tools. Each questionnaire type will be pre-tested in the first instance with two members of MSF national staff, convenience sampled with permission from relevant supervisors. As with the initial review of FGD and interview questions, MSF colleagues who are already familiar with the research team should more readily provide honest and critical feedback on the structure, tone and terminology used throughout the survey. After initial revision, a pre-test will be conducted with five people from each of the four target groups. Pre-test participants will be selected through a convenience sample of members of the local community.

The purpose of the pre-test will be explained, and participants told that they may withdraw consent from participating in the survey at any time if they feel uncomfortable and no longer wish to contribute. Pre-test participants will be given the option of self-completion of the questionnaire, or saying the answers out loud for the interviewer to write down. It will be made clear to the participant that the data collected from their survey will be anonymised, and will not contribute to the final study but is necessary to help guide the direction and content of the research. Information sheets will be provided for pre-test participants, and verbal consent will be requested.

Pre-test data will be reviewed by the field research team, and any further adaptations to the survey terminology, structure or content will be made accordingly. Pre-test data will not be included in the final results of the study.

#### Data collection

Questionnaires will be led by a trained field research assistant, supported by the PI. The study groups of male and female patients and caretakers (inpatients and outpatients) will be selected from a convenience sample of visitors to the health structure, while the groups of female and male staff members taken from a convenience sample of MSF national staff. Each invited participant will be assured that their involvement is voluntary, and any data collected will be unidentifiable and remain confidential. Participants will be invited to a private room or area of the health structure and asked that they feel comfortable. Before commencing the survey, they will have an opportunity to ask questions that they may have about the research. The participant will be given the option of self-completion of the questionnaire, or saying the answers out loud for the interviewer to write down. It is anticipated that each questionnaire will take 30-45 minutes to complete.

Details regarding informed consent and confidentiality are outlined in section 6.7, with participant information sheets provided in annex K, sections 11.10.1 – 11.10.13 (27).

#### Data entry and analysis

Paper questionnaires will be used to collect data, and entered into a password-protected file in Epi Data or Excel depending on the situation. In terms of analysis, we will analyse each questionnaire separately by target group, and compare the findings between groups. If relevant, we may combine female patient groups (i.e. inpatient and outpatient) if there are no clear differences between them.

Simple frequencies and proportions will be calculated for the answers provided by each target group. Although participants will be selected through convenience sampling, given the relatively large sample sizes, it is considered valid to extrapolate the findings to the general population of the area where the health centre is. Data analysis will be conducted for each study site separately. Some comparisons for specific outcomes might be made between study sites using Chi square statistics and relevant p-values. However, this comparison will only be used to illustrate key differences between study sites.

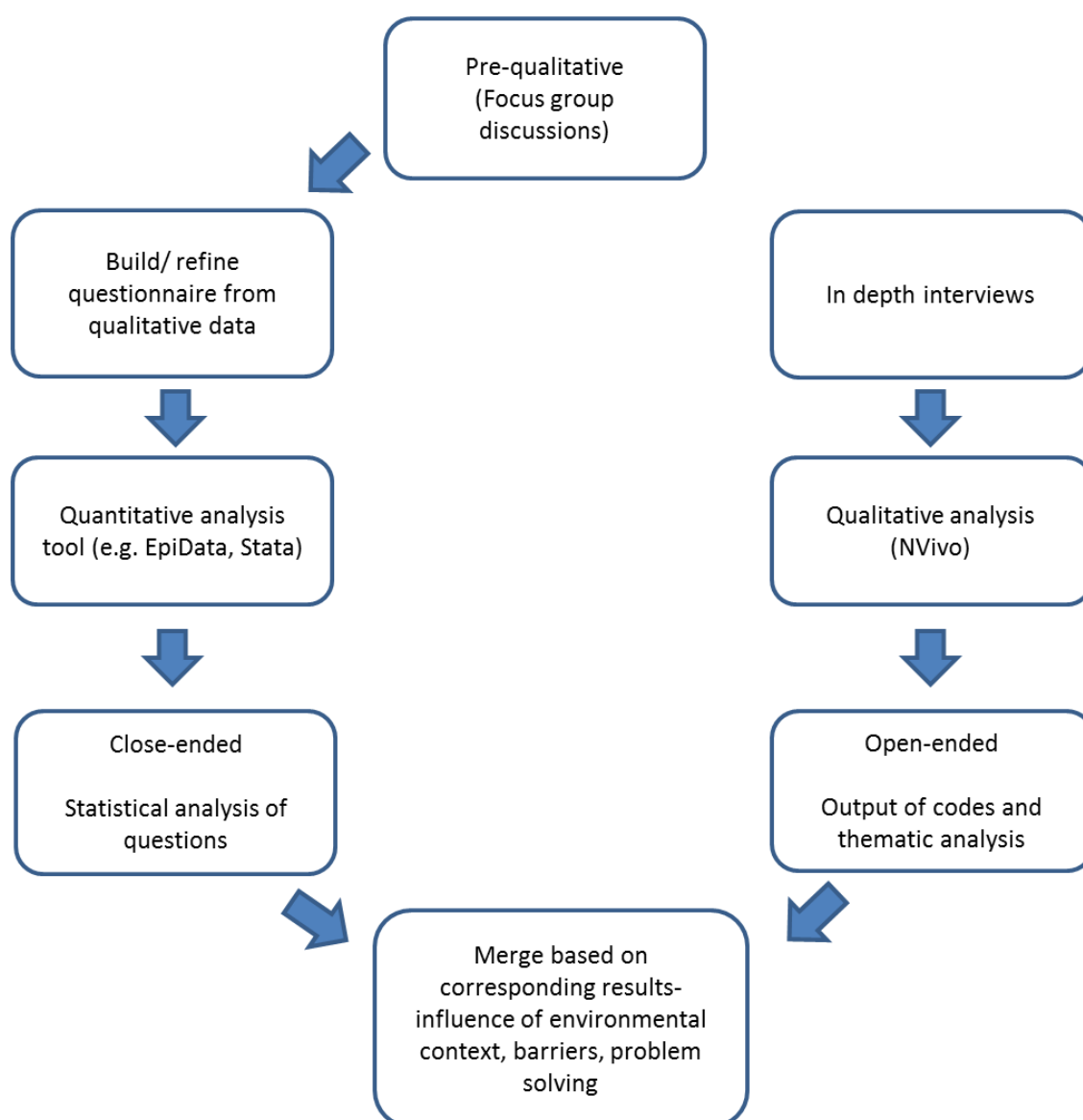


## 6.5. Data integration and analysis

Data analysis will be integrated at the interpretation and reporting level, and conducted for each study site separately. Quantitative findings from the questionnaire (stage 2b) and analysis from the pre-exploratory qualitative component (stage 2a) will be merged to provide a comprehensive, multifaceted description of factors influencing MHM practice, effective systems and uptake in health facilities. This will allow review and analysis of the survey results to tailor the subsequent in-depth interview instrument (stage 2c) to follow-up on confusing or significant responses. This iterative analytic approach also aims to simplify subsequent attempts to integrate the coded qualitative data collected in IDIs with survey data.

The following flow chart describes the planned sequence of data analysis:

Figure 1: Flow chart of data analysis



## 6.6. Observational hardware assessment

### Assessment questionnaire

An observational assessment of the Water and Sanitation facilities in each health structure will be carried out by field research staff supported by the PI, and recorded in an observational checklist (Annex C). The purpose of this checklist is to establish what sanitation and hygiene facilities currently exist in the health structure for women to manage their menstruation. This will help to expose any gaps in hardware and service provision relating to MHM, and provide an additional layer of context that may influence behaviour of menstruating women and girls.

This checklist will be observational in nature, but will require the assistance of a member of staff from the health structure knowledgeable about the WatSan facilities to direct the field research staff to the relevant areas in which to use the checklist, and to address some of the questions in the checklist relating to topics such as patient numbers, and cleaning schedules of sanitation facilities at the health structure. The member of staff will be identified by the health structure facility manager or equivalent. The checklist will measure: quantity, state and design of toilet and washing facilities for female staff, patients and caretakers; relevance and privacy of units for disposal and washing of menstrual material; existence of areas for female patients and caretakers to dry reusable menstrual materials; and the existence of material provided for women to manage menstruation in the health structure.

The observation will be conducted once in each health structure. For consistency, the assessment will be conducted in the morning (specific time to be confirmed) across each of the health structures included in the study. Time of assessment will be recorded for each observation.

### Data entry and analysis

Findings from the hardware observation will be recorded in the assessment observation checklist (annex C), and entered into a password protected file in EpiData. Frequencies and proportions of each relevant indicator in this checklist will be calculated for each study site. A comparison between each of the indicators between study sites will be done by calculating Chi squares and relevant p-values where appropriate.

### Adjustments based on findings

As the hardware checklist will indicate immediate aspects of the MHM components of the specific study sites that require improvement or changing, the relevant recommendations will be shared immediately with the project team (Project Coordinator and Medical Team Leader). This will facilitate a rapid action plan to improve the MHM in study sites immediately upon the implementation of the study.

## 6.7. Informed consent and confidentiality

We anticipate requiring approval from the person(s) responsible for the health structure before commencing the study. Specific information relevant to the study site, including the process for engaging facility owners, workers and patients will be included in the individual contextualised protocols to be submitted at a later stage. A generic information sheet and consent form for the person(s) responsible for health structures has been included as section 11.10.13 within annex K.

Information will be provided separately to all individual participants approached for the survey, IDIs and FGDs. Verbal consent will be sought, as depending on the local context, written consent may reduce participation due to the fear of any consequences for the signatory.

Potential candidates will be informed about the purpose of the study both verbally, and through a written information sheet which will be explained clearly, using a language that the participant is able to understand. The research team will state that participation is voluntary, and that for potential participants there will be no repercussions for non-participation and that the respondent can change their mind at any time to participate, with the choice to not answer any particular question asked during the interview or to withdraw at any point.

Voluntary informed consent will be obtained after the information sheet has been understood, and immediately prior to interviews or discussions taking place, using a form to guide the consent process (11.10.1 – 11.10.13 within annex K). Verbal consent will be sought by the field study investigator in the local language by way of an easily administered verbal consent procedure.

During the verbal consent procedure, it will be made clear to all pre-test and interview, FGD and survey participants that their involvement is entirely voluntary, and that they may leave the conversation at any point during the process. IDIs, FGDs and surveys will be conducted in locations such as private rooms in the health structures, individual homes (for participants selected from the local community), places where community meetings are usually held or for clinic staff, places where they may hold their regular meetings. This will optimise the comfort and privacy for participants. Prior to their involvement, information about the purpose, methods and objectives of the study will be provided to all potential participants through a written information sheet, using context-appropriate language (annex K, sections 11.10.1 – 11.10.13) (27). Invited participants will be given time read (or be read, in cases of illiteracy) the information sheet, and be encouraged to ask questions where clarification or further details about the study and research process are required. Before requesting consent, invited participants will be asked open questions to verify their understanding of the study and the purpose of their involvement. Following this process, verbal consent will be requested from each pre-test and interview participant. All identifying information across data sets, interview transcripts and field notes will be replaced by pseudonym or removed to ensure information cannot be traced back to person or place. This will be made clear to all participants prior to their involvement.

In the first instance, health facility staff will be asked to participate outside of working hours. Only if this is not possible will supervisors be informed in order to find alternative cover, or arrange for them to take part during a less busy period of the working day.

It is possible that minors (under 18 years of age) will be included as participants in the study, given that, for the purpose of the study, reproductive age (of female patients and carers) begins at 15 years. When recruiting minors, parents or guardians will be consulted, and required to give permission and verbal consent. Verbal assent will be required as normal from the participant, who will also be given an information sheet. Both parties must provide permission in order for the interview to take place. Parents or guardians will be welcome to be present during interview if requested by their child or ward, but will not be free to answer questions on behalf of the participant. To maintain confidentiality for other participants, parents or guardians of minors will not be allowed to be present during FGDs. Information sheets for minors and their parents/ guardians are included within annex K, as sections 11.10.3 (FGDs); 11.10.7 (IDIs); and 11.10.12 (Surveys).

In summary:

- Information sheet in language understood by the participant is read aloud, and or explained to the participants and acknowledgement assured

- Participant will consent verbally to two parts: for the interview or discussion to take place, and for the conversation to be recorded
- In cases where minors asked to participate in the study, permission of their parent or legal guardian will be sought
- In addition to consent from parent or legal guardian, assent from the young person will be included as part of the consent, taken as a signal that they are willing to take part
- After ensuring that the participant is competent to consent and understand what they are consenting to, the investigator obtaining consent will record and date on the verbal consent guide that the research study has been described, and questions answered by, or on behalf of the participant.

The above record will be witnessed by a person known and chosen by the participant. In cases of illiteracy, this witness will be required to reassure the participant that the information sheet is being read as written, and to provide a signature as confirmation

## 6.8. Data protection and management

After conducting the IDIs, discussions and questionnaires (pre-tests and during the actual study), we will ensure that all data collected (audio recordings, digital files, transcripts, field notes) is managed respectfully, with confidentiality, and used solely for this study.

Data collected will not be shared with others, presented or published without consent of the Medical Director of MSF-OCA. Audio files will be destroyed following translation and checking. Anonymous transcripts and field notes will be destroyed after five years and/or two years following publication.

Each respondent will be given an identification code corresponding to the time they were interviewed, so that they can only be identified by the researcher. A master list of names of study participants, identification codes and corresponding transcripts and audio recordings will be stored with password protection on the PI's computer. Secure back-ups will be made according to the project's data security standards, in case the PI's computer is lost, stolen or damaged.

## 6.9. Interview language

The research assistants will conduct the surveys, IDIs and FGDs in the relevant local language for the context, unless there are participants who can and feel more comfortable speaking English or French. The PI will initially directly oversee the activities to ensure consistency of methodology, and that each member of the research team is comfortable with the questions and data collection process. IDIs and FGDs will be recorded, and transcribed verbatim, and translated verbatim into English by a locally recruited and trained translator (where translation is necessary) supervised by the research assistant and PI to work within the terms of reference for the study. All translations will be checked through back translation technique.

## 6.10. Data validation and quality assurance

In this mixed methods study, data is being collected from a variety of sources to compare and strengthen related conclusions. Prior to detailed analysis, survey, interview and focus group transcripts will be reviewed by the PI to ensure that appropriate participants were sampled in accordance with the inclusion criteria, and that written consent was provided by each participant.

For qualitative data, validation will be established by reflection of the role of the researcher as a confounding factor throughout the analysis, acknowledging the potential for bias. Deviant or negative case analysis will assist with this. Triangulation will take place by searching for convergence and explanations among the different sources of information gathered. A data analysis plan will be agreed between quantitative and qualitative results to enhance integration of all data set findings.

Quality will be assured through thorough documentation of the research process, to include a clear account of procedures used as an audit trail that can be easily followed. From the outset, decision making will be transparent, with a systematic approach to methodology design and analysis followed by the research team. Field diaries will be kept for self-reflection. This process will be enhanced through the application of technical supervision, and regular discussion of quality issues within the research team maintained throughout the research.

### **6.11. Limitations**

Depending on the size of the health structure, there may be difficulty in reaching the proposed numbers of study participants for IDIs and surveys. If this is the case, numbers will be made up by men and women from the local community within close proximity of the health structure who meet inclusion criteria and agree to participate.

It is anticipated that the main burden to participants, restricting their involvement in the study will be the time taken for IDIs/ FGDs/ surveys. This will be particularly relevant for staff members required to take time out of regular treatment of patients. Objections may come from potential recruits themselves, clinic staff treating patient participants, or managers of clinic staff. To mitigate this, project teams based at the health clinics will provide input into participant recruitment, and timings for staff and patient interviews to prevent interference with routine programmatic or caregiving activities. There may be instances where remuneration of participants is necessary and will be followed as per the MSF standards. For patients and caregivers, this may be in the form of non-monetary tokens for MHM materials or soap kits.

The need to work with translators poses the risk of inaccuracies and distortions in questioning participants, and recording their answers. Careful selection, training and supervision of translators should help to mitigate this.

## **7. Risks and Benefits of the Study**

### **7.1. Project and community level benefits**

The study will increase awareness of the issues relating to menstrual hygiene, and be instrumental to finalisation and implementation of a contextually appropriate toolkit for MHM following completion of the research. This will encourage and help women to make their own, informed decisions about how they manage their menstruation in a dignified manner.

Quantitative assessments at each health structure will expose any gaps in hardware provision relating to MHM, and contribute to a plan for each project team to provide all necessary facilities to meet the needs of menstruating women from the community who access the health structure. The outcomes of this study may help to normalise dialogue around women's health, and menstrual hygiene management amongst patients, caretakers and staff in MSF health facilities, and across MSF projects more broadly.

## 7.2. National and international benefits

Menstrual hygiene management in low income settings has been the subject of an increasing number of studies in the last decade, yet to our knowledge, there are currently no studies tackling the MHM landscape in health structures. Whilst this study is specific to MSF-OCA health structures in three individual project sites, we anticipate for the guidelines drafted and implementation toolkit developed to be applicable in any MSF health structure, worldwide.

By contributing to a growing body of literature considering menstrual hygiene in low income settings, we hope to promote further emphasis on gender equity in water, sanitation and hygiene programmes, and help to normalise dignity and respect for women in health structure settings.

## 7.3. Potential risks

Given the intimacy of the subject, we may face difficulties when trying to encourage women and girls to talk openly about menstruation. This may be a result of stigma or taboo around the subject, and perceived criticism from peers. We will mitigate any potential problems with participant uptake through pre-exploratory FGDs and pretesting to ensure that socially and culturally appropriate terminology is used to minimise discomfort or embarrassment. We may see considerable differences between study sites in terms of the degree of openness with which participants contribute to discussion on this topic, for example, depending on cultural norms or religion. Further information will be included in the contextually specific protocols.

It is additionally necessary, yet may be challenging to engage men and boys on this topic (33). In some cases, older women may prevent the inclusion of men in the dialogue, since they may feel that menstruation is solely a woman's problem (34). Men will be included in the quantitative aspect of this study in addition to IDIs to help understand their beliefs and degree of knowledge on the subject, and whether they might present barriers to women accessing appropriate and essential MHM services.

The research team will ensure that IDIs, FGDs and surveys are conducted in private, in a setting where participants, when asked, say that they feel comfortable and would be open to talk. To encourage open dialogue around a sensitive topic, we will ensure that all participants are fully informed on the purpose of study, and sensitised towards the topic. Information sheets (Annex F) will be provided and explained to each of the recruited participants by the PI and research assistant, accompanied by a translator where necessary..

Given the degree of sensitivity and taboo associated with this subject (4,5,8,19), the research assistants will be trained on questioning styles and techniques to deal with the social sensitivity, building trust with respondents to provide a positive and relaxed atmosphere to promote sharing of perspectives and reduce the risk of limited or false narratives. More generally, instability in the regions of each research site may delay or disrupt the research process, although it is not anticipated that these sites will be in areas of high security risk.

## 8. Ethical Considerations

### 8.1. Respect for recruited participants and study communities

Summary findings of the study will be made available to all participants via staff at the health structure, presented in the most suitable language.

During analysis of the qualitative data, the researchers will draw out selected case studies and quotes of individuals to be used at the reporting stage to more clearly illustrate a point of discussion, and to explore the interrelation of themes. These case studies and quotes will be entirely anonymised using codes as identifiers, and recorded only with the expressed permission of the contributing participant.

The process for recruiting minors has been outlined in section 6.7 (Informed consent and confidentiality). Verbal assent will be required from participants under 18 years of age, with verbal consent provided by a parent or guardian.

## **8.2. Independent review**

This protocol will be submitted to the relevant national Ethics Review Boards, in addition to the MSF Ethics Review Board.

## **9. Study implications and implementation**

### **9.1. Collaborative partnership**

This study represents collaboration between the Ministries of Health of each of the countries chosen for the study, and Médecins Sans Frontières. Within Médecins Sans Frontières, the co-investigators are based in the Operational Centre in Amsterdam (The Netherlands), and UK Programmes in London (UK).

### **9.2. Dissemination plan**

Following the study, a pamphlet will be prepared for distribution, in addition to matching poster to be put up in each health structure. It will not be easily feasible to trace each study participants and provide them with individual feedback without requesting the contact details of each, thus compromising agreements of confidentiality. With this in mind, prior to their commitment, it will be explained to study participants that a summary of research findings will be available at the health structure. A process of iteration will be followed with the participants, whereby recommendations will be requested on how best to present findings in a form that the community will appreciate and use. To further communicate research findings within the health structure, meetings will be held with all staff to provide them with anonymised feedback. Relevant findings will be incorporated into hygiene promotion messages. For partners, and for MSF internally, a report with a summary of agreed recommendations will be developed and provided.

A briefing paper will be produced, highlighting key study findings and their relevance to programming, including any recommendations that emerge. These will be distributed to MSF field contacts and coordination teams, specifically those responsible for WatSan. Findings will be shared and discussed with relevant contacts from the appropriate MoHs. A study manuscript will be produced and submitted for publication in a peer reviewed scientific journal. Discussions will be held with the MoH, MSF field contacts and coordination teams regarding implementation of study findings to future programme activities.

### **9.3. Implementation plan**

Results of the study will be presented to the MSF-OCA Water and Sanitation Unit, providing the information required to develop a comprehensive and generalisable set of guidelines and toolkit for

MHM in MSF health structures. Existing tools, such as those from Mena (13) and De Lange *et al* (6) will be reviewed during stage 1 of the study, and relevant aspects incorporated into the new guidelines and toolkit. These will be tested by WatSan managers in selected MSF-OCA projects before being integrated into standard MSF-OCA WatSan protocol and later in MSF (international) guidelines. WatSan managers will be supervised remotely by WatSan advisors in HQ and encouraged to provide regular feedback, and any adaptations to guidelines and toolkit will be made where necessary. A survey will be drafted by the PI, and where possible, conducted with staff and patients to determine whether opinions and trends around MHM in the health facility have changed due to the intervention and application of the tools. An additional hardware assessment will be carried out in the original research sites to establish whether the WatSan facilities for MHM have improved following the application of the guidelines, and indications they better meet requirements of menstruating women

#### 9.4. Resources and budget

The research assistants will carry out all IDIs, FGDs and questionnaires, using local languages to maintain consistency, with training and supervision provided by the PI. Identification of study participants will be facilitated with assistance from the MSF health promotion team or similar. Logistical support will be required from the MSF field team in terms of transport between project sites, and hospital directors or MTL will be necessary to assist with identification of and access to spaces in which to conduct interviews etc. A locally trained translator will be hired to provide verbatim copies of transcripts for all IDIs and FGDs.

Monetary and practical remuneration for the translator and research assistants will be agreed beforehand, and built into the project budget. The salary of the PI, in addition to cost of living and transport will be covered for nine months.

#### 9.5. Premature termination

Given that this is a generic protocol, we cannot yet confirm any security restrictions which may be in place in any of the study sites. However, it is acknowledged that these areas may experience security risks due to conflict or other factors. Local project security rules will be adhered to as per MSF policy. If the study has to be stopped prematurely, further discussion will be sought with the local authority and Regional, Zonal, District and National security offices. All participants and stakeholders will be informed, and feedback of preliminary findings communicated where available. The data collected will be stored securely on the computer server.



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## 11. Annexes

### 11.1. Annex A: Focus Group Discussion for Female Patients and Carers

Introduction (5 mins max)

- Thank the participants for agreeing to take part in this research
- Introduce yourself
- Create a relaxed atmosphere; offer the participants something to drink when this is possible

Tell the group:

“I (We) would like to talk to you about the topic of menstruation, and your experiences of menstrual hygiene management. I would like to understand the needs of women and girls with regards to sanitation and hygiene, and to hear your opinions as users, on how we, as Médecins Sans Frontières, can improve the facilities in this health structure to make them more suited to your needs.

The interview will take approximately 45 - 60 minutes, and anyone may decide to leave at any time if they no longer wish to contribute. All opinions are valid, and everything you say here is confidential. Be honest, and say whatever you think. The conversation will be recorded, to take the pressure off having to write notes as we talk.

- Make sure the group participants have been informed about the study and have consented verbally to participate in the research
- NOTE: Turn on the recorder and test it is recording (avoid placing cell phones close to recorder!)

Introduction	<ul style="list-style-type: none"><li>• Study aim</li><li>• Why invited to participate</li><li>• Consent and respect within the group</li></ul>	
Knowledge of menstruation	<i>I'd like you to talk about menstruation, and your understanding of the process</i>	When and how did you first learn about menstruation, and methods for management?  Do you think it is important to manage menstruation properly?

<p>Usual practices of menstrual hygiene management</p>	<p><i>How do you think most women in your community manage their menstruation?</i></p>	<p>Preference for disposable of reusable/washable? (present examples)</p> <p>(For disposable) how are materials disposed of?</p> <p>(For washable) how are materials washed and dried?</p>
<p>Difficulties faced when menstruating</p>	<p><i>What challenges do you think women face when they are menstruating?</i></p>	<p>Perception of family members (restricting behaviour?)</p> <p>Should men be included in the discussion?</p> <p>Limited access to facilities of materials for management, washing or disposal</p>
<p>Opinions of sanitation and hygiene facilities in the health structure</p>	<p><i>What do you think about the sanitation and hygiene facilities at the health structure?</i></p> <p><i>(If you've noticed, or required them) how suitable do you feel are the facilities for MHM at the health structure?</i></p>	<p>Do the latrines suit needs?</p> <ul style="list-style-type: none"> <li>- What do you use them for?</li> <li>- Do you feel comfortable using them?</li> </ul> <p><i>(First ask if this is relevant – if women haven't menstruated at the clinic, ask what they theoretically would do)</i></p> <p>How do you manage your menstruation at the health clinic?</p> <ul style="list-style-type: none"> <li>- What difficulties do you face? <i>(E.g. privacy, proximity, lockable latrine doors etc.)</i></li> <li>- How do you dispose of used materials at the clinic?</li> <li>- Where and with what do you wash and dry your reusable materials?</li> </ul> <p>How could disposal or washing facilities be improved at the health clinic?</p> <p>Generally – what changes could we make to the facilities and services at the health clinic to make MHM easier for you?</p>

General observations of moderator	
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## 11.2. Annex B: Focus Group Discussion for Female Staff Members

Introduction (5 mins max)

- Thank the participants for agreeing to take part in this research
- Introduce yourself
- Create a relaxed atmosphere; offer the participants something to drink when this is possible

Tell the group:

“I (We) would like to talk to you about sanitation and hygiene facilities at this health structure, and your opinions of their suitability for patients and their caretakers to manage menstruation. I would like to understand the needs of women and girls from the perspective of a practitioner at this health structure, and to understand how we, as Médecins Sans Frontières, can improve the facilities to make them more suited to the needs of the communities which we serve.

The interview will take approximately 45 - 60 minutes, and anyone may decide to leave at any time if they no longer wish to contribute. All opinions are valid, and everything you say here is confidential. Be honest, and say whatever you think. The conversation will be recorded, to take the pressure off having to write notes as we talk.

- Make sure the group participants have been informed about the study and have consented verbally to participate in the research
- NOTE: Turn on the recorder and test it is recording (avoid placing cell phones close to recorder!)

Introduction	<ul style="list-style-type: none"> <li>• Study aim</li> <li>• Why invited to participate</li> <li>• Consent and respect within the group</li> </ul>	
Opinion of the sanitation and hygiene facilities in the health structure	<p><i>What do you think about the sanitation and hygiene facilities at the health structure?</i></p> <p><i>(If you've notice) how suitable do you feel are the facilities for MHM at the health structure?</i></p> <p><i>Are they easily accessible for the patients as well as caretakers?</i></p>	<p>As far as you are aware, do the latrines suit the needs of users of the health structure?</p> <p>What do they think about services provision for MHM? (e.g. does the health structure provide materials)</p> <p>Are staff members briefed on how to assist patients with MHM if necessary?</p> <p>Do patients or caretakers ever ask for assistance with MHM?</p> <ul style="list-style-type: none"> <li>- If so, in what context?</li> <li>- What challenges do they face?</li> </ul>

		Are you aware of any logistical challenges at the health structure with regards to MHM (e.g. problems with disposal)?
How could MHM facilities be improved for women using the health structure?	Generally – what changes could be made to the facilities and services at the health clinic to make MHM easier for users?	Better disposal or washing/ drying facilities?  Training for staff members on how to assist patients and caretakers access MHM facilities?
General observations of moderator		

### 11.3. Annex C: Hardware assessment observation checklist

Observer's name:  Date:

Country:  Start time:

Facility name:

#### Objectives:

- To establish what WatSan facilities are available in the health structure
- To assess the standards of the WatSan facilities in the health structure
- To determine what hardware is available to facilitate MHM

#### Health structure personnel

---

##### Q1. How many inpatients/ carers are there in the health structure? (at time of study)

Total	Male	Female
-------	------	--------

---

##### Q2. How many staff members are there?

Total	Male	Female
-------	------	--------

---

##### Q3. How many outpatients pass through the health structure each day?

Total	Male	Female
-------	------	--------

---

##### Q4. Is there a WatSan officer assigned to the clinic?

Yes  No

#### Water

---

##### Q5. What is the health structure's main water source?

- |   |  |
|---|--|
| <input type="checkbox"/> Piped water into clinic      | <input type="checkbox"/> Unprotected spring                          |
| <input type="checkbox"/> Piped water into clinic yard | <input type="checkbox"/> Rainwater collection                        |
| <input type="checkbox"/> Public tap/ standpipe        | <input type="checkbox"/> Tanker-truck                                |
| <input type="checkbox"/> Tubwell/ borehole            | <input type="checkbox"/> Surface water (river, dam, lake, pond etc.) |
| <input type="checkbox"/> Protected dug well           | <input type="checkbox"/> No water available in or near clinic        |
| <input type="checkbox"/> Unprotected dug well         | <input type="checkbox"/> Other (specify) _____                       |
| <input type="checkbox"/> Protected spring             |  |

##### Q6. What is this water source used for? (check all that apply)

- |                                      |  |
|--------------------------------------|--|
| <input type="checkbox"/> Drinking    | <input type="checkbox"/> Anal cleansing after defecation |
| <input type="checkbox"/> Handwashing | <input type="checkbox"/> Showers                         |



- Washing during menstruation  
 Flushing or pour flushing toilets

- Cooking  
 Other (specify) \_\_\_\_\_
- 

**Q7. Is there unlimited access to water throughout the day?**

Yes  No

---

**Q8. (if NO) How many litres of water is provided per person, per day?**

## Sanitation

---

**Q9. Does the health structure have toilet facilities?**

Yes  No

*If yes, what type of facilities? (check all that apply)*

- |   |  |
|---|--|
| <input type="checkbox"/> Pit latrine          | <input type="checkbox"/> Pour flush toilet |
| <input type="checkbox"/> Improved pit latrine | <input type="checkbox"/> Composting toilet |
| <input type="checkbox"/> Flush toilet         | <input type="checkbox"/> Other (specify)   |
- 

**Q10. Are there separate toilet facilities for patients/carers and staff?**

Yes  No

---

**Q11. Are there separate male and female toilet facilities?**

Yes  No

*a. If yes, are female toilets lockable from the inside?*

Yes  No  Some

# with doors and locks:

# with doors and no locks:

# with no doors:

*b. If yes, are female toilets out of view of males?*

Yes  No  Somewhat

---

**Q12. Are toilet facilities accessible to people with disabilities?**

Yes  No

**Q13. How many operational toilet compartments are there for patients/carers and staff? \***

Latrines	Functional	Partially functional	Non-functional
Female patients/ carers			
Male patients/ carers			
Communal patients/ carers			
Female staff			
Male staff			
Communal staff			
For anyone in the clinic (patients, carers, staff, male or female)			

\*Key for table:

**Functional:** Not physically broken and can be used

**Partially functional:** Can be used, but problems with the infrastructure and repair is needed

**Non-functional:** So badly damaged or deteriorated so cannot be used

**Q14. Are the toilet facilities lit at night?**

Yes  No  Some

**Q15. Are there cleaners responsible for maintaining the latrines?**

Yes  No

**Q16. How often are the latrines cleaned each day?**

Never  1-2 times  3 times +

**Q17. Is there a cleaning record/ rota?**

Yes  No

**Q18. In general, how clean are the toilet facilities? \***

	Clean	Somewhat Clean	Not Clean

Male patients'/carers' toilets			
Female patients'/carers' toilets			
Male staff toilets (if any)			
Female staff toilets (if any)			
Communal toilets			

\*Key for table:

**Clean:** Not smelly, no visible faeces in or around facilities, no flies or litter

**Somewhat clean:** Some smell and sign of faecal matter, some flies and litter

**Not clean:** Strong smell, presence of faecal matter, flies and lots of litter

## Hygiene

---

**Q19. Does the health structure have hand washing units?**

Yes  No

---

**Q20. Are there separate hand washing units for males and females?**

Yes  No

---

**Q21. How many functional hand washing units are there in the clinic? \***

Handwashing facilities	Functional	Partially functional	Non-functional
Female patients/ carers			
Male patients/ carers			
Communal patients/ carers			
Female staff			
Male staff			
Communal staff			

\* Key for table:

**Functional:** Not physically broken, water is always available

**Partially functional:** Water is sometimes available, or only available in limited quantity

**Non-functional:** Physically broken, or no water available for hand washing

---

**Q22. Is there soap available?**

Always  Sometimes  Never

---

**Q23. How many showers/ washing facilities are there in the clinic? \***

	Functional	Partially functional	Non-functional
Male showers			
Female showers			
Communal showers			

\*Key for table:

**Functional:** Regular access to water, in a good physical state

**Partially functional:** Irregular access to water, problems with infrastructure and need repair

**Non-functional:** No access to water, infrastructure damaged and deteriorated

---

**Q24. Is there any hygiene promotion in the clinic?**

Yes  No

### **Menstrual Hygiene Management (MHM)**

---

**Q25. Do facilities exist for the disposal of used menstrual materials?**  
*(in or near individual toilet cubicles)*

Yes  No

*If so, what means of disposal exist/ are used by women?*

- Closed waste container
- Open waste container
- Burning
- Burying
- Put in latrine
- Other (explain)

**Q26. Where disposal facilities are provided, do they seem to be being used?**

Yes  No  Somewhat

---

**Q27. Is there private space for women to wash and dry reusable menstrual materials?**

Yes  No  Washing only

---

**Q28. Are there private washing facilities for women to use whilst menstruating?**

Yes  No

*If yes, what are they using these for? (check all that apply)*

- Washing themselves
  - Laundry
  - Washing reusable material
  - Cleaning children
  - Other (explain)
- 

**Q29. Are female latrines and washing stations located close to the health structure?**

Yes  No

---

**Q30. Are female latrines and wash facilities shielded from view by a screen or similar?**

Yes  No

## 11.4. Annex D: Quantitative Survey - Female Patients and Caretakers

### Knowledge of menstruation:

1. To what degree do you think that menstruation is embarrassing/ shameful?

Not at all shameful;  
Slightly shameful;  
Very shameful;  
Extremely shameful

2. Do you find difficult to maintain personal hygiene when you're menstruating?

Very difficult  
Slightly difficult  
Not very difficult  
Not at all difficult

3. Which of the following do you feel you need during your period to manage it? (select all which apply)

- A private place to wash
- Space to dry materials
- Disposal facilities
- Access to menstrual materials
- *Other options to be included following review of FGDs*

4. Is it easy for you to manage your menstruation at home? Y/N

If no, why? (Circle all relevant)

- No latrine
- Latrines are not private
- Do not feel safe using latrine
- Poor disposal facilities at home
- No access to menstrual materials
- *Other options to be included following review of FGDs*

5. Which of the following can/do you talk with about your menstruation? (Circle all relevant):

- Mother
- Daughter
- Sister
- Aunt
- Grandmother
- Father
- Son
- Brother
- Uncle
- Close friends
- *Other options to be included following review of FGDs*
- No one

6. Do you discuss menstruation in general with male family members/ friends? Y/N

If yes, why? *(circle all relevant)*

- Husband/ father controls the family budget
- They care about my well-being
- They care about female dignity
- Concern about female safety
- *Other options to be included following review of FGDs*

If no, which of the following are reasons? *(circle all relevant)*

- It is a problem for women only
- Men believe menstruation is unnatural and wrong
- *Other options to be included following review of FGDs*

7. How much do you think you spend on average per month to manage your menstruation?

*(Provide option of cost brackets based on local prices)*

### **Health Structures**

8. Do you think male and female latrines should be separate in this health structure? Y/N

- If yes, *for which of the following reasons?*

- Security
- Privacy
- Cleanliness
- *Other options to be included following review of FGDs*

- If no, for which of the following reasons?

*\*(Provide options using information gathered during FGDs)*

9. Do you feel safe when using latrines at the health structure? Y/N

*If yes, for which of the following reasons? (circle all relevant)*

- Separate male/ female
- A door with a lock
- Close to the facility
- Lights at night
- Clean
- *Other options to be included following review of FGDs*

*If no, for what reasons? (circle all relevant)*

- They do not lock

- Male/ female not separate
- Too far from the facility
- No lights at night
- Unclean *Other options to be included following review of FGDs*

10. If you were bleeding in the health facility, where would you go to wash, and change your materials (if you use any)?

- Latrines
- Showers
- Outside the facility
- *Other options to be included following review of FGDs*

11. Does this MSF health structure meet your needs in terms of MHM? Y/N

- If yes, why?

\*(Provide options using information gathered during FGDs)

- If no, for what reasons? *(circle all relevant):*

- There is limited privacy
- Poor washing facilities
- No space to dry materials
- Not comfortable with the disposal
- Disposal system for used pads not appropriate
- No access to menstrual materials
- *Other options to be included following review of FGDs*

12. Did someone show and explain to you the MHM facilities on arrival at the health structure? Y/N

- If yes, was the explanation clear? Y/N

- If no, would it have been helpful to have received such an orientation? Y/N

13. Are you able to access menstrual materials at the health structure? Y/N

- If yes, which of the following? *(circle all relevant):*

- Toilet paper
- Natural materials
- Disposable pads
- Tampons
- Menstrual cups
- Towels or other absorbent, reusable fabric
- *Other options to be included following review of FGDs*

14. Are you aware of any posters or materials promoting MHM in the health structure? Y/N

## **Menstrual hygiene management behaviour**



15. What material do you primarily use to manage your menstruation? (circle all relevant)

**Washable**

Towels/ fabric  
Homemade reusable pad  
Shop-bought reusable pad  
Menstrual cup

**Disposable**

Pads  
Toilet paper  
Natural materials (e.g. cotton, leaves)  
Tampon

**Other**

Nothing

*Other options to be included following review of FGDs*

- If washable: for which of the following reasons?

- More hygienic
- Comfortable
- Cheaper
- Easier to use
- More accessible
- *Other options to be included following review of FGDs*

- If washable: what is most important to you?

- Private space for washing and drying materials
- Separate male and female latrines and washing facilities

\*(Provide additional options using information gathered during FGDs)

- *If disposable*: for which of the following reasons?

- More hygienic
- Easier to use
- Don't have to wash anything
- Comfortable
- More accessible
- Cheaper
- *Other options to be included following review of FGDs*

16. *If disposable*: how do you prefer to dispose of used menstrual materials?

- Burning – personally
- Open waste container in latrine or shower
- Closed waste container in latrine or shower
- Burying personally
- Put in latrine *Other options to be included following review of FGDs*

## 11.5. Annex E: Quantitative Survey - Female Staff Members

### Sanitation and hygiene facilities at the health structure

1. Do you think male and female latrines should be separate at the health structure? Y/N

If yes, for which of the following reasons? (circle all relevant):

- Security
- Privacy
- Cleanliness *Other options to be included following review of FGDs*

If no, why not?

*\*Options will be provided using information gathered during FGDs*

2. Are you aware of the sanitation and hygiene facilities available for female staff and caretakers to use at the health structure? Y/N
3. Do you think that the latrines at the health structure are safe for women to use? Y/N

*If yes, why? (circle all relevant)*

- A door with a lock
- Separate male/ female
- Close to the facility
- Lights at night
- Clean *Other options to be included following review of FGDs*

*If no, why not? (circle all relevant)*

- They do not lock
- Male/ female not separate
- Too far from the facility
- No lights at night
- Unclean
  - *Other options to be included following review of FGDs*

### Menstrual hygiene management at the health structure

4. Is menstruation talked about openly at work with colleagues? Y/N

If yes, in what context? (*Options will be provided following information gathered during FGDs*)

5. Do you think menstruation should be talked about openly at work with colleagues? Y/N
6. Where do women in the health structure manage their menstruation?

*(Options will be provided following information gathered during FGDs)*

7. Are you aware of any problems women face regarding MHM at the health structure? Y/N

If yes, what? *(Options will be provided following information gathered during FGDs)*

8. Are you aware of the materials being used by patients and caretakers in the health structure for MHM? Y/N

If yes (circle all relevant)

- Toilet paper
- Natural materials
- Disposable pads
- Tampons
- Menstrual cups
- Towels or other absorbent, reusable fabric
- *Other options to be included following review of FGDs*

**(Specifically for cleaners/ maintenance staff)**

9. Is the disposal system for used menstrual materials effective? Y/N

If yes/no, why? *(Options will be provided following information gathered during FGDs)*

**(Specifically for medical staff responsible for direct patient care)**

10. Are you ever required to help female patients with MHM? Y/N

If yes, how? *(Options will be provided following information gathered during FGDs)*

## 11.6. Annex F: Quantitative Survey - Male Staff Members

### Sanitation and hygiene facilities at the health structure

1. Do you think male and female latrines should be separate at the health structure? Y/N

- If yes, why? (circle all relevant):

- Security
- Privacy
- Cleanliness
- *Other options to be included following review of FGDs*

*\*Additional multiple choice options will be provided following information gathered during FGDs*

- If no, why not?

*\*Multiple choice options will be provided following information gathered during FGDs*

2. Do you know where the female latrines and showers are at the health structure? Y/N

3. Which of the following do you think apply to the female latrines at the health structure?

- Doors have locks
- Separate male/ female latrines
- Close to the facility
- Lights at night
- Clean
  
- They do not lock
- Male/ female not separate
- Too far from the facility
- No lights at night
- Unclean
- Don't know anything about facilities available for women
- *Other options to be included following review of FGDs*

### Menstrual hygiene management at the health structure

4. Do you think it's important for male staff to understand menstrual hygiene management, and the needs of menstruating women?

Very important

Slightly important

Not very important

Not at all important

- Reason for answer:

-

*Options to be included following review of FGDs*

5. Is menstruation talked about openly at work with colleagues? Y/N

- If yes, in what context? (*Options will be provided following information gathered during FGDs*)

6. Do you know where do women in the health structure manage their menstruation? Y/N

- If yes, where?

*\*Multiple choice options will be provided following information gathered during FGDs*

- If no, why not?

(e.g. it is a woman's problem...)

-

- *\*Multiple choice options will be provided following information gathered during FGDs*

7. Do you think that women face any problems regarding MHM at the health structure? Y/N

- If yes, what?

- *\*Multiple choice options will be provided following information gathered during FGDs*

-

8. Do you know any of the materials that patients and caretakers use in the health structure for MHM? Y/N

- If yes (circle all relevant)

- Toilet paper
- Natural materials
- Disposable pads
- Tampons
- Menstrual cups
- Towels or other absorbent, reusable fabric

*Options to be included following review of FGDs*

**(Specifically for cleaners/ maintenance staff)**

9. Do you think that disposal system for used menstrual materials is effective at the health structure? Y/N/unsure

- If yes/no, why?

*\*Multiple choice options will be provided following information gathered during FGDs*

**(Specifically for medical staff responsible for direct patient care)**

**10.** Have you ever been required to help female patients with MHM? Y/N

- If yes, how? (*Options will be provided following information gathered during FGDs*)

## 11.7. Annex G: Quantitative Survey - Male Patients and Caretakers

### Knowledge of menstruation:

1. Do you live with women in your household? Y/N
  
2. Do you think that it is embarrassing or shameful for a woman to menstruate? Y/N
  - If yes, why?
  - If no, why not?

\*Options will be provided using information from FGDs

3. What do you think the needs are of women whilst they are menstruating?

\*Options will be provided using information from FGDs

4. Do you think it is important to include men in any discussion about MHM? Y/N
  - If yes, why?
  - If no, why not?

\*Options will be provided using information from FGDs

5. Do women in your household talk openly about menstruation? Y/N
  - If yes/no, do you think they should? Y/N
  
6. (If there are women of reproductive age in the household) Are you aware of how much is being spent on MHM materials, on average per month? Y/N
  - If yes, roughly how much? (price bracket options will be provided following FGDs)

### Health Structures

7. Do you think male and female latrines should be separate? Y/N
  - If yes, why?
    - Security risk for women if male and female latrines are co-located
    - Privacy
    - To maintain cleanliness of latrines

*Options to be included following review of FGDs*

- If no, why not? (\*options will be provided using information from FGDs)
  
8. Do you feel comfortable letting your wife/daughter etc. use the latrines at the health structure? Y/N

- If yes, why? (circle all relevant)

- Separate male/ female
- A door with a lock
- Close to the facility
- Lights at night
- Clean

*Options to be included following review of FGDs*

- If no, why not? (circle all relevant)

- They do not lock
- Male/ female not separate
- Too far from the facility
- No lights at night
- Unclean

*Options to be included following review of FGDs*

9. Where do you think menstruating women go to wash, and change their materials in the health structure?

- Unsure
- Latrines
- Showers
- Outside the facility

*Options to be included following review of FGDs*

10. What do you think would make the lives of women in the health structure easier with regards to MHM?

\*Options will be suggested following FGDs



## 11.8. Annex H: In-depth interviews Topic Guide – Female Patients and Caretakers

### **Introduction 5 mins**

*(Introduction interviewer, moderator)*

Thank interviewee for taking part in the research.

Introduce self and MSF, and explain that the interview aims to last approximately 45 mins - 1 hour.

We would like to talk to you about your needs with regards to sanitation and hygiene at your local health structure and what you think about the services provide for women to manage their menstruation. I'd like to hear your opinion as a user, or potential user of the facilities, and understand what we can improve to make them more suited to your needs.

We may discuss specific issues with regard to the types of materials you use to manage you menstruation, what your priorities are when you are menstruating and what support you would expect the health structure to provide. This interview is an opportunity for you to share your thoughts and feelings on this issue.

If at any point you would like to take a break or stop the interview, just let me know.

Reassurance regarding confidentiality - *nothing you say will be linked to your name or will lead to you being identified.*

**Main topics – order of questions will be driven by the nature of answers**, which means that 'question' wording during the session will likely be modified. Answers will not be recorded on the topic guide, but as audio data captured on a handheld recording device, and as bullet points in a notebook.

### **1. Understanding and experience of menstruation**

**Opening question:** *can you tell me about your first experiences menstruating, and what it's been like to date?*

- Is the process of menstruation understood?
- Where and at what stage are women taught about menstruation, and how to manage it?
- What difficulties have women faced with regards to their menstruation? *(Physical pain, shame, embarrassment etc.)*

\*Note how easy it seems to be for the women to talk about the subject

### **2. Factors influencing behaviours of women around MHM (social, cultural, economic)**

- What materials do women use to manage menstruation, and why?
- Is there a preference towards disposal or washable materials?
- Do men seem to influence the behavior of women with regards to MHM?
- How do women go about managing menstruation at home?

### **3. Use of services at the health structure**

- What do women think about the infrastructure for disposal, or washing materials in the health structure?
- What gaps and barriers are there in health structures which prevent women from managing menstruation effectively?
- What do women think would make the facilities better/ more suitable for managing menstruation?

**Moderator:** Research topics to be covered across all depths as a whole. The moderator to identify salient topics to discuss from responses given.

**Moderator:** Summarise conversation and what has been discussed throughout the interview

4. What do you feel have been the most important things that we have spoken about?
5. Is there anything else that you would like to discuss?

Any additional questions?

Thank you and close

## 11.9. Annex I: In-depth Interviews Topic Guide – Female Staff Members

### **Introduction 5 mins**

*(Introduction interviewer, moderator)*

Thank interviewee for taking part in the research.

Introduce self and MSF, and explain that the interview aims to last approximately 45 mins - 1 hour.

We would like to talk to you about sanitation and hygiene at this health structure and what you think about the services provided for female patients and their caretakers to manage their menstruation.

I'd like to hear your opinion as a practitioner, and understand what we can improve to make MHM facilities more suited to the needs of users.

I am particularly interested to understand the issues that patients and caretakers experience with regards to MHM, and what support you would expect the health structure to provide. This interview is an opportunity for you to share your thoughts and feelings on this issue.

If at any point you would like to take a break or stop the interview, just let me know.

Reassurance regarding confidentiality - *nothing you say will be linked to your name or will lead to you being identified.*

**Main topics – order of questions will be driven by the nature of answers**, which means that 'question' wording during the session will likely be modified. Answers will not be recorded on the topic guide, but as audio data captured on a handheld recording device, and as bullet points in a notebook.

**Opening question:** *can you tell me what you think about the sanitation and hygiene facilities at this health structure?*

#### **1. Opinions of the services available for female users of the health structure**

- Are staff members aware of the MHM facilities available?
- What do they think about the infrastructure for disposal, or washing materials?
- Do patients/ caretakers ever ask for assistance when menstruating – e.g. pads/ materials, space for washing etc.
- What difficulties do staff think women face with regards to their menstruation at the health structure?

#### **2. How could MHM facilities be improved for female users?**

- What are the minimum standards expected for effective MHM?
- What gaps and barriers prevent women from effective MHM?
- What would make the facilities better/ more suitable for MHM?

**Moderator:** *Research topics to be covered across all depths as a whole. The moderator to identify salient topics to discuss from responses given.*

**Moderator:** *Summarise conversation and what has been discussed throughout the interview*

- 3.** What do you feel have been the most important things that we have spoken about?

**4.** Is there anything else that you would like to discuss?

Any additional questions?

Thank you and close

## 11.9. Annex J: In-depth Interviews Topic Guide – Male Members of the Community

### **Introduction 5 mins**

*(Introduction interviewer, moderator)*

Thank interviewee for taking part in the research.

Introduce self and MSF, and explain that the interview aims to last approximately 30 – 45 mins.

We would like to talk to you about sanitation and hygiene, with particular emphasis on menstrual hygiene and how women in your home manage menstruation. I'd like to understand how you view the subject of menstrual hygiene, and women who are menstruating.

We may discuss specific issues with regard to the practices you are aware of women in your household adopting when menstruating, and the facilities that you have in place to facilitate these practices.

This interview is an opportunity for you to share your thoughts and feelings on this issue.

If at any point you would like to take a break or stop the interview, just let me know.

Reassurance regarding confidentiality - *nothing you say will be linked to your name or will lead to you being identified.*

**Main topics – order of questions will be driven by the nature of answers**, which means that 'question' wording during the session will likely be modified. Answers will not be recorded on the topic guide, but as audio data captured on a handheld recording device, and as bullet points in a notebook.

#### **1. How men view menstruation**

**Opening question:** *You have women in your life...can you tell me what you think about menstruation?*

- Is the process of menstruation understood?
- Do men think menstruation is a natural process?
- Are men perpetuating any rumours or traditional practices around MHM?

\*Note how easy it seems to be for the men to talk about the subject

#### **2. Factors influencing behaviours of women around MHM (social, cultural, economic)**

- Are men aware of what women in their household do for MHM?
- Is money set aside to buy materials for MHM?
- Do men restrict behaviour of menstruating women?
- What do men think, of menstruating women in the household?
- How do men treat menstruating women in the household?

#### **3. MHM facilities in the household**

- How safe/ appropriate do men think sanitation/ hygiene are for women in their household?
- What would men like women to have access to for MHM in the household?

**Moderator:** *Research topics to be covered across all depths as a whole. The moderator to identify salient topics to discuss from responses given.*

**Moderator:** *Summarise conversation and what has been discussed throughout the interview*

4. What do you feel have been the most important things that we have spoken about?
5. Is there anything else that you would like to discuss?

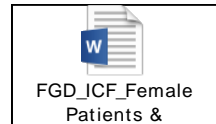
Any additional questions?

Thank you and close

## 11.10. Annex K: Verbal consent and information sheets

The following embedded documents include the verbal consent forms and information sheets for each of the study components described in this protocol:

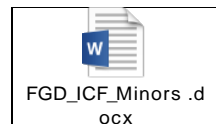
### 11.10.1. FGD: Female patients and caretakers



### 11.10.2. FGD: Female staff members



### 11.10.3. FGD: Minors



### 11.10.4. IDIs: Female patients and caretakers



### 11.10.5. IDIs: Female staff members



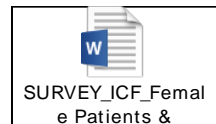
### 11.10.6. IDIs: Men (community)



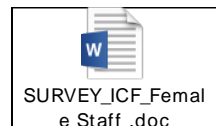
### 11.10.7. IDIs: Minors



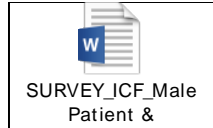
### 11.10.8. Surveys: Female patients and caretakers



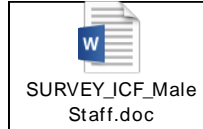
### 11.10.9. Surveys: Female staff members



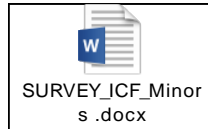
11.10.10. Surveys: Male patients and caretakers



11.10.11. Surveys: Male staff members



11.10.12. Surveys: Minors



11.10.13. Health structure consent form: Generic

