





MENSTRUAL CUP PILOT INTERVENTION IN ADJUMANI DISTRICT UGANDA







FINAL IMPLEMENTATION REPORT





ABOUT WOMENA: WoMena is a non-governmental organization focusing on bridging the gap between reproductive health innovations and implementation of these innovations. WoMena promotes the use of evidence-based, effective reproductive health technologies and solutions such as menstrual cups through research, advocacy, awareness raising and project implementation. We specialize in creating supportive environments for innovations at both the local and national level and have supported over 14 organisation's and institutions introducing menstrual cups to +90 communities in Uganda through high-quality program design, training and follow up (www.womens.dk).

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TABLE OF CONTENTS

ACRONYMS	5
EXECUTIVE SUMMARY	6
BACKGROUND	7
Bfree Menstrual Cup	8
OVERVIEW OF THE PROJECT	9
Potential Impact of the Intervention	9
MHM Pilot Intervention Objectives	9
IMPLEMENTATION OVERVIEW	10
PROJECT RESULTS	12
OVERVIEW OF ACTIVITY AND BENEFICIARIES	12
Phase 1: Preparation and Exploratory Phase	12
Stakeholders Meeting & Exploratory Visit	
Phase 2: MHM Training of Trainers and Trial Period	
Edutainment by PHAU	
Phase 2: TOT and Follow up	
ToT Follow-up and Refresher	
Phase 3: Training of Beneficiaries and Bfree Cup Kit Distribution	
Phase 4: ToB Follow-up and Monitoring	
ToB Refresher Training Sessions	
PROJECT OUTCOMES AND INDICATORS	
Baseline MHM Practices	16
Product (Bfree) Uptake	18
Preferred Bfree Cup Sizes	19
Changes in MC and MH Perceptions	
Menstrual Cup Use, Challenges, and Feedback	
Reduced Stigma of Menstruation	
Virginity	
Improved Knowledge on MHH and Menstrual Cup Usage Male Involvement	
Male Menstrual Health Knowledge	
Financial Impact on Period Poverty	
School Attendance	
Improved Self-Confidence and Comfortability	24
INTERVENTION CHALLENGES	24
LESSONS LEARNED	25
RECOMMENDATIONS FOR SCALE UP	25
CONCLUSION	26
REFERENCES	27



ACRONYMS

FGD Focus Group Discussion

IDIs in depth Interviews

MC Menstrual Cup

MH Menstrual Health

MHH Menstrual Health and Hygiene

MHM Menstrual Health Management

NGO Non-Governmental Organization

OPM Office of the Prime Minister

SRHR Sexual Reproductive Health and Rights

TOT Trainer of Trainees

UNHCR United Nations High Commissioner for Refugees

WASH Water, Sanitation, and Hygiene

EXECUTIVE SUMMARY

In Uganda approximately 86% of South Sudanese refugee arrivals are women and children (UNHCR, 2017a). Globally, girls and women often lack the ability to manage their menstruation with dignity due to lack of adequate and private facilities, safe, acceptable and accessible menstrual health products and knowledge, which can be further exacerbated during conflict and displacement. Menstrual health management is, however, often an overlooked component in acute and protracted emergency situations, as it is not considered life threatening. The menstrual cup is increasingly considered a possible solution for girls and women's menstrual management in both low-income and humanitarian settings. However, there is limited awareness of the menstrual cups in humanitarian programming and minimal evidence on its introduction, acceptance, and effectiveness in refugee settlements. With support from WoMena Uganda and Public Health Ambassadors Uganda (PHAU) and funding from the UNFPA, Women's Global Health Innovations (WGHI) implemented a menstrual cup pilot intervention in Alere Secondary School and Dzaipi Secondary School in Dzaipi and Alere Refugee Settlements in Adjumani District, Uganda, to assess the acceptability and overall impact of introducing the new anti-microbial Bfree menstrual cup.

The pilot intervention was carried out over a period of fourteen (14) months, with a three-month product use period for Trained Trainers and a five-month trial period for primary beneficiaries (i.e. female students at Alere S.S. and Dzaipi S.S.). The intervention consisted of pre-intervention exploratory visits, and inception meeting with key stakeholders, training of trainers, training of beneficiaries (both girls and boys) on MHM, distribution of a menstrual health kit containing a menstrual cup, and follow-up refreshers and M&E visits. In total, 10 local teachers, 2 War Child Canada staff, and 1 government officials were trained as trainers in menstrual health and 212 schoolgirls received training and a Bfree Cup Kit containing three different sized volume menstrual cups (10ml, 15ml & 25ml). WoMena Uganda carried out monitoring & evaluation (M&E) activities throughout the intervention with the training and technical support of PHAU and WGHI. The quantitative and qualitative M&E tools included menstrual health management (MHM) pre-training surveys, product uptake surveys, knowledge retention tests, baseline and end line questionnaires, in depth interviews and focus group discussions (FGDs).

Results from the baseline indicated that girls and women struggle to manage their menstruation effectively and with dignity. The qualitative data showed that although not always accessible, most girls use disposable pads, , resulting in girls using cloth as make-shift pads. Additionally, the girls reported they were often staining with their current products, causing embarrassment or shame at school.

Despite initial concerns about the menstrual cup, product uptake among intervention participants was high, with 91% of surveyed recipients using their menstrual cups consistently at end line (based on reported use during the last menstrual cycle). After getting over the

initial fear of using the cup, users reported the menstrual cup being comfortable to use. Adherence to safe care and user guidelines appeared high among participants, reporting they maintained correct handwashing and storage procedures - which was easier given the installation of hand washing facilities at the schools and the storage tin provided as part of the Bfree Cup Kit. Access to clean water for rinsing the cup was the biggest barrier, although girls found ways around it by carrying a bottle of water with them to the school latrine/washrooms.

Recommendations for scale up include the incorporation of menstrual health clubs to further engage students and assess MHM challenges from a bottom-up, youth-led approach. Additionally, increased inclusion of school administrators and teachers at intervention schools is encouraged to strengthen supportive structures and school receptiveness to the intervention. An overall increased level of community sensitization and male involvement is encouraged to ensure sustainability and ongoing support once pupils exit the school setting. Finally, in future scale up there should be focus on gaining a more nuanced understanding of menstrual patterns and experiences with strengthened M&E framework.

BACKGROUND

Worldwide, women and girls can often not manage their menstruation with dignity due to lack of adequate and private facilities as well as safe, acceptable and accessible menstrual health products and knowledge. These critical health challenges are further exacerbated during displacement and conflicts. In humanitarian and conflict-affected settings, menstrual health management (MHM) is often overlooked, as it is not considered urgent.

Menstruation is one of the major factors that affects school attendance among girls. They don't only lack safe products to use, but also menstrual health knowledge and private WASH facilities for changing are limited, and gender-specific needs for girls are overlooked, resulting in a lack of changing rooms and facilities for product disposal for girls at school. A number of UN Agencies and NGOs have implemented menstrual health interventions in different refugee settings in Adjumani District, to ensure there is reduced gender inequalities and ensure girls stay in school, and there is growing awareness on the cross-cutting nature of MHM.

The primary grantee, Women's Global Health innovation, and sub-grantees, WoMena Uganda and Public health Ambassadors Uganda (PHAU), have implemented a Bfree menstrual cup pilot intervention in Dzaipi and Alere refugee settlements, Adjumani district, Uganda, that aimed at increasing acceptability of menstrual cups as a way to improve menstrual health management in schools. The program was integrated into the school program and comprehensive menstrual health education was also delivered before distribution of the products. Different stockholders (incl. the district health department, political leaders, and administrative Headmasters) from both the refugee and from host community were involved in the provision of education to increase access to MHM information and services for adolescents and young people in the two intervention schools.

The project aimed to contribute to the attainment of a higher quality of life for adolescent girls living in different refugee settlements in Adjumani District, with a special focus on improving menstrual health management and strengthening supportive structures in Dzaipi secondary school and Alere secondary school.

Bfree Menstrual Cup

There is a lack of suitable MHM methods for women and girls in humanitarian contexts which has significant impact on their reproductive health, and more broadly, their physical, social and mental wellbeing. Menstruation is often surrounded by taboo and shame which further restricts girls and women during this natural biological process. Safe and cost-effective waste management from disposable MHM methods poses an additional challenge. The menstrual cup (MC) is increasingly being considered as a possible way to improve the MHM of women and girls in low-income contexts. The MC is a bell-shaped cup made of medical-grade silicone and is worn inside the vagina during menstruation to collect menstrual fluid. A MC can collect three times as much fluid as a tampon can absorb, poses less risk of leakage than certain other methods and can be used comfortably once the user is familiar with its use. It can be cleaned and reused for up to ten years, and the MC is more cost-effective than disposable pads if used for more than 6-12 months.

The menstrual cup is increasingly considered a possible solution for girls and women's menstrual management in refugee settlement settings. While the traditional MCs require boiling for 5-8 minutes after each menstrual period, the Bfree Cup does not need to be boiled, requires less water than reusable pads/cloths, and does not require soap or space for drying. The MC is worn inside the vagina, and therefore, underwear is not required. All of these

Bfree Cup

Women's Global Health Innovations (WGHI) developed an improved, innovative anti-microbial version of the MC, the Bfree menstrual cup. The Bfree MC is a novel and innovative product. It's the first not to require water to wash or boil between menstrual cycles to sterilize. It's 100% of medical grade (Polydimethylsiloxane, PDMS) without additives or microbicides. The Bfree MC is a unique patent pending design. Unlike other silicone-based MCs, the Bfree MC is made of silicone gel (PDMS gel) as it contains a reservoir of oil within the silicone matrix. The silicone gel maintains a non-adhesive liquid layer of oil at the surface of the cup. This liquid layer disables bacterial adherence thus preventing biofilm formation and bacterial colonization. The liquid protective layer is spontaneously replenished when the existing liquid interface is removed during use and washing. All materials used to manufacture the Bfree MC are pre-approved by the Food and Drug Administration (FDA) agency for nonpermanent internal use.

attributes are especially beneficial in the humanitarian and low-income context with limited access to water, soap, and privacy. The reported benefits of the MC compared to other methods are reduced leaking and worries, increased comfort, wellbeing, confidence, mobility, privacy, independence as well as saving money not having to buy other products.



OVERVIEW OF THE PROJECT

This project recognized that the Government, the UNHCR, other donor services and the private health services in Adjumani District cannot attend to the menstrual health problem in Adjumani District. It addressed the problem of the method and materials to be used in menstrual situations by the girls in the settlements. The project **piloted** interventions towards alleviating menstrual discomfort, and improving the attendant health and hygiene.

Potential Impact of the Intervention

PRODUCT ACCESSIBILITY: Menstrual Health products in humanitarian contexts are supplied by humanitarian agencies like UNFPA, UNHCR, etc. which is not done on a regular basis as menstrual health is not a priority. This situation causes refugee women to use unsafe products thus negatively impacting their ability to engage in economic improving activities and heighten the risk of urogenital infections. The frequent distribution of disposable pads to the refugee women involves a lot of bureaucracy for the product to reach the end user and is unsustainable. High quality Menstrual Cups are the best products to distribute to women in emergency contexts - or low-income settings - as they last for up to ten years and the user does not have to worry about what to use to manage with dignity her next menstrual period.

HEALTH: Lack of access to safe menstrual products by girls and women in refugee populations affects hygiene and their sexual and reproductive health. Context studies have shown that the refugee girls and women use rags, leaves and papers. These are unhygienic and can lead to girls and women to contract infections that may affect their reproductive health. The solution to this is the Menstrual Cup, made of medical grade silicone. It is safe to use on the female human body if used and maintained properly.

WASH and Environment: One of the challenges of this project is the access to private WASH facilities in the humanitarian context. WASH facilities in this context are not private for the girls and women changing the menstrual product and they lack disposable facilities which really affects the environment as the disposable menstrual pads are disposed of in the washrooms and latrines leading to clogging of the washroom/ toilets and premature filling of the latrines.

MHM Pilot Intervention Objectives

The Bfree pilot intervention aimed to introduce the Bfree anti-bacterial menstrual cups to adolescent girls through integration into the school's program. The project was carried out over a period of 14 months. The aim of the intervention was to assess the acceptability and possible potential impacts of menstrual cups as an MHM method for girls in the refugee context. The primary target group was girls and boys in schools, teachers and health workers within the humanitarian context to promote a supportive environment in the school setting.

The pilot intervention was carried out over a period of 14 months, with a 4 -month product use period for the girls. The intervention consisted of an inception meeting, exploratory visits, training of trainers (ToT), training of beneficiaries (ToB) and distribution of the Bfree Cup Kit containing three different sized volume cups (10ml, 15ml & 25ml).

Objectives

- 1. Provide menstrual health education to both boys and girls in two schools in Adjumani District.
- 2. Provide a sustainable menstrual health management solution (Bfree cup) to girls in two intervention schools.
- 3. To provide sufficient education to secondary support individuals from the two schools and other stakeholders in the community
- 4. Ensure engagements of the boys at all levels of implementation with aim of reducing the stigma caused.
- 5. Assess the intervention using different monitoring and evaluation methods to determine whether the intervention is effective and can be scaled up.

WoMena Uganda carried out monitoring & evaluation (M&E) activities throughout the intervention while Public Health Ambassadors Uganda conducted the Training of Beneficiaries. Both PHAU and WoMena conducted monthly follow-ups. The developed M&E tools (e.g. preand post-tests, FGD and IDIs interview guides, and MHM surveys) captured quantitative and qualitative data and measured project indicators, including knowledge retention, product uptake, user satisfaction, and male involvement.

IMPLEMENTATION OVERVIEW

The project was implemented in in four phases:

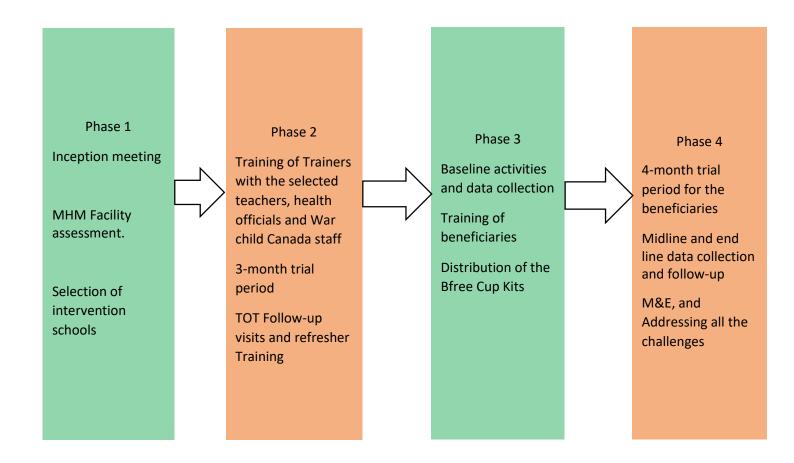
- 1) Preparation and inception meetings phase
- 2) Training of Trainers on MHM and 3-month menstrual cup trial period
- 3) Training of Beneficiaries and Bfree Cup Kit distribution
- 4) 4-month trial period and monthly monitoring from December 2018 to February 2020.

Before implementation, the project received approval from the OPM, Ministry of Health, District local government and informed consent was given by the head of the schools to take pictures and the students to participate in the interviews. All respondents understood English and there was no need for translation. Data collected remained confidential and anonymous, and any names provided in this report are not the actual names of the quoted beneficiary.

Primary target group: School going girls (under 18 yrs) and women (18 yrs and older) at Dzaipi S.S. and Alere S.S. in Adjumani, Uganda

Support persons and trained trainers: Intervention school teachers, district health officials, and school administrators

Secondary target group: General community members including men, key stakeholders including OPM, UNHCR, and UNFPA



PROJECT RESULTS

OVERVIEW OF ACTIVITY AND BENEFICIARIES

<u>Indicator</u>	Phase 1	Phase 2	Phase 3	Phase 4
# of trained females < 18 y.o.	-	-	71	-
# of trained females ≥ 18 y.o.	-	-	107	-
# of trained males	-	-	243	-
# of female trainers trained	-	9	-	-
# of male trainers trained	-	3	-	-
# of local government officials trained	-	1	-	-
# of beneficiaries reached in follow-up and refresher training	-	10	-	196
# of evaluation forms and knowledge tests completed		23	462	143
Intervention sites	(1) Alere Secondary school - WASH assessment (2) Dzaipi Secondary School - WASH assessment	(1) Alere Secondary School(2) Dzaipi Secondary school	(1) Dzaipi Secondary School(2) Alere Secondary School	(1) Dzaipi Secondary School(2) Alere Secondary School
Bfree Cup Kits distributed	-	13 (Set incl. 2 sizes)	178 (Set incl. 3 sizes)	34 (Set incl. 3 sizes)
Total Menstrual Cups Distributed (2/3 per Bfree Cup Kit)	-	26	534	102

Phase 1: Preparation and Exploratory Phase

Stakeholders Meeting & Exploratory Visit

The intervention activities commenced in December 2018 with an exploratory visit and project inception meeting which aimed to introduce the Bfree team, the Bfree menstrual cup, and the project plan to the Adjumani technical and local leaders, the District Health officer (DHO), head teachers and headmasters from the respective intervention schools,

representatives from the Office of the Prime Minister (OPM), UN agencies (e.g. UNHCR and UNFPA), and civil society organizations like War child Canada., followed by the proper use and care.

Through consultation with the Office of the Prime Minister (OPM), the district health management team (DHMT), District education management team (DHMT) and school administrators, Dzaipi Secondary School and Alere Secondary School were chosen as the pilot intervention schools.

Improvement of the WASH facilities

Still in the preparation phase, the project team improved the WASH facilities at the two intervention schools by repairing and renovating the handwashing facilities and ensuring access to water close to the toilet facilities. Water tanks of 100 liters were installed, and the toilets were painted with pictorial instructions on how to use the menstrual cup. It was agreed after the consultation meeting with the DHO and the education officer that there is a need to promote the culture of hand washing

Target School Criteria:

- Existence of Adult Accelerated Programs (ALP) in each school
- Co-ed schools with both female and male students from both the host and refugee communities
- Willingness to participate from school administrators

among all students, not only the recipients of the cup. In response, two latrines in Alere S.S. and one latrine in Dzaipi S.S. were renovated and repainted with the aim of providing privacy to the recipients of the cup during the insertion, removal or changing while at school.



In addition to that, two water drains - one for each intervention school - were bought and placed near the toilets, and two tanks were installed next to the latrines to trap rain water with the aim of ensuring ongoing availability of water for handwashing.

Phase 2: MHM Training of Trainers and Trial Period

Edutainment by PHAU

As part of the program, PHAU introduced a concept of edutainment as a tool to raise the level of engagement for younger adolescents in puberty and MHM training and also to be used as a promotional tool for the Bfree Cup project. The edutainment initiative resulted in a <u>music</u> video starring students from Dzaipi S.S. and Alere S.S.

Phase 2: TOT and Follow up

In January 2019, WoMena Uganda and PHAU trained 10 teachers (male and female), 2 staff from War Child Canada and 1 District health Officer in a ToT. The ToT was conducted during school holidays in order to follow the Ministry of Education guidelines that teachers' programs should not be interrupted during school time. For three consecutive days, the trained teachers were equipped with the essential information to manage and conduct an MHM and menstrual cup training in their respective schools as well as



provide the necessary support to menstrual cup recipients. The teachers that participated included two (2) Female teachers from Adjumani Secondary School, one (1) male teacher from Dzaipi Secondary School, two (2) staff from War Child Canada, three (3) teachers from Alere SS (incl. one male teacher), two (2) teachers from Pagirinya Secondary school, and one (1) teacher from Pakele SS. In total, 13 participants received the training.

The menstrual cup was introduced, which started by introduction the different menstrual cups' brands including the Ruby cup and the Bfree cup with the aim of promoting product

Training of Trainers Topics:

- Menarche to Menopause
- Reproductive systems and anatomy in relation to menstruation
- Menstrual Cycle
- Healthy Periods
- MHM Methods
- Myths and Facts Around Menstruation
- Hymens and virginity

choice. Trainers went ahead to explain the proper use and care of the menstrual cup through demonstrations, the female reproductive anatomy, the insertion and removal of the cup, addressing leakages, and all issues raised by the participants.

On the last day of the three days, training evaluations were administered and filled in by the participants. Overall, the level of satisfaction was high with high participant willingness to deliver the MHM training in their communities and respective schools, to support girls, and to learn through sharing. As a result, each participant received a training hand

book to guide them through the training and refer to throughout project implementation.

ToT Follow-up and Refresher

The trained participants followed-up and refreshed on the material by WoMena Uganda in May 2019. The purpose was to facilitate and enforce the skills and knowledge given in the TOT after four months. The training was attended by 10 Training of Trainers as well 1 government official (Assistant District Officer). The refresher was tailored to the participant's overall understanding and progress. refresher training test was



administered before the refresher which identified gaps in knowledge: these were topics emphasized in the refresher. It is expected that after the training, potential trainers will be able to work effectively with the Bfree team to support girls in their respective schools to effectively manage their menstruation and also to make sure that the information and the training skills gained during this training are used effectively.

Phase 3: Training of Beneficiaries and Bfree Cup Kit Distribution

Training of Beneficiaries (ToB)



In October 2019, WoMena supported a comprehensive ToB conducted by PHAU at Dzaipi S.S. and Alere S.S. The ToB covered SRH, MHM, and Bfree menstrual cup use and care. Topics covered included: puberty, menstruation, menstrual

Training of Beneficiaries (ToB) Training Agenda

Session 1: Introduction to Puberty and Menstruation

Session 2: The Reproductive System

Session 3: Menstrual Cycle

Session 4: Myths and Facts Around Menstruation

Session 5: Person Hygiene and Pain Management

Session 6: Alternative MHM products i.e. Reusable Pads

Session 7: Menstrual Cups

cycle, female reproductive system, menstrual pain and hygiene management and Menstrual cup use and care. After completion, each female participant received a Bfree Cup Kit (Set

including 3 sizes). The training was delivered to 246 boys and 212 girls. To ensure active participation during the different training sessions, boys and girl's sessions were conducted separately.

Preceding the ToB, baseline data collection was captured on student's MHM practices, products used, initial MH knowledge, accessibility of water, soap, and privacy, and overall views - both personal and communal regarding menstrual health and menstruation.

Phase 4: ToB Follow-up and Monitoring

ToB Refresher Training Sessions

Follow-up visits are vital aspects of an MHM intervention. They limit misunderstandings surrounding menstruation and ensure adequate support is provided to the beneficiaries to address fears on cup use and community perceptions about the product. They also provide opportunity for measuring product uptake as its gradual process that, on average, takes girls 2-3 menstrual cycles. Throughout the 4-month beneficiary trial period (Nov 2019 - Feb 2019), two follow-up visits and refresher training were facilitated during which M&E activities were conducted (e.g. completion of surveys, FGDs, IDIs, and knowledge tests). Data was collected during the field visits and inserted into KoboToolbox for analysis. Different tools and methods were employed to measure relevant indicators at midline (Nov 2019) and end line (Dec 2020), and the results are incorporated below in Project Results & Achievements.

The refresher training was done based on a 'learning by doing' approach where participants were asked to demonstrate different aspects of menstrual cup use and care like insertion, removal, hand washing, and storage of the cup among others. This was also done to make sure participants better remember product use through interactive learning.

WoMena's experience is that the menstrual cycle and period tracking are the topics with least beneficiary comprehension at follow-up visits. Therefore, these are the main topics that WoMena trainers recapped for the participants to have a clear understanding. Following the first refresher training, beneficiaries showed improvement on these topics, demonstrating how to track their periods and count their cycle.

PROJECT OUTCOMES AND INDICATORS

Baseline MHM Practices

A pre-training MHM survey (Annex 2) was administered to all girls at both Dzaipi and Alere secondary schools to capture product usage, comfortability, MHM impact on school attendance, and support persons for menstruating girls and women in Adjumani refugee settlements. This data was collected as a baseline to measure the MHM landscape within the community both attending and surrounding the schools and the MHM intervention's impact and product (i.e. Bfree Cup) uptake.

139 school going girls completed the MHM survey (74 from Alere secondary school and 62 from Dzaipi secondary school) of which 125 respondents had experienced menarche. Those who had not yet started their menstruation were instructed to bypass questions pertaining to product usage and comfortability and answer only questions on their MH support persons. While 178 school girls attended the training, some participants arrived late or declined participation in the survey. Additionally, the surveys were meant to capture demographic data such as status (i.e. refugee or national), age and class; however, many respondents did not complete these areas, and as a result, the demographic information represents only 78 participants (44% of the female beneficiaries) of which 56% are Ugandan nationals and 42% consider themselves refugees.

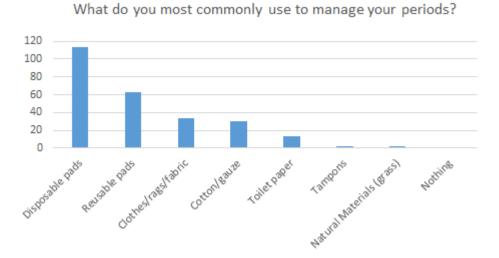
Methodology

Project results and achievements were captured using various developed tools and data collection methods throughout the project cycle, including MHM surveys, FGDs, IDIs, and training observations.

Measured Indicators

- 1. Knowledge Retention
- 2. Product Uptake
- Changes in Perceptions and Attitudes
- 4. Impact on School Attendance
- 5. Male Involvement

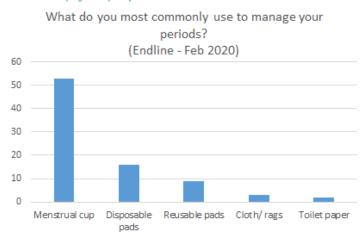
The MHM survey asked participants to indicate which MHM products/materials they commonly use to manage their periods. As summarized in the chart below, most girls reported using disposable pads (82%) to most commonly manage their periods followed by reusable pads (46%), clothes/rages/fabric (25%), and cotton/gauze (22%). This was also reflected in baseline IDIs during which both male and female interviewees indicated disposable pads were most easily accessed, although most costly. The frequent usage of disposable pads may be due to various factors, such as wider availability and/or distribution of disposable pads at school or limited access to water and soap; however, as demonstrated in the Bfree product uptake below, it seems limited product choice was an influencing factor as girls reported reducing their use of disposables following menstrual cup distribution. This data provides a good sample of the MHH landscape in Adjumani secondary schools and can be used to further inform project scale up.



The survey also captured who provided participants with menstrual health information and products to determine which supportive structures existed within schools, families and the

wider community. To determine MHM support persons, the participants were asked which persons in their lives provided them with information and support on their menstrual health. Respondents overwhelmingly reported their mother both as a source of information and support (69% of respondents) and as a provider of their menstrual products (81%). Results also showed that the participants felt they could rely on their friends (36%) and sisters (35%) for menstrual health information and support. 38 out of 137 respondents (28%) also listed their teachers as a source of support: an identifiable area of improvement seeing as the majority of participants are boarding students away from their mothers throughout the year. The lack of supportive persons and structures at school may also correlate with 24% of girls indicating "Myself" as their main provider of menstrual products and only 7.5% reporting the school as a source of MHM products. These findings demonstrate that school going girls especially those in boarding - may often be left to provide their own products when their mothers are absent, perpetuating the idea that such issues are meant to be dealt with without the support of your community and/or school.

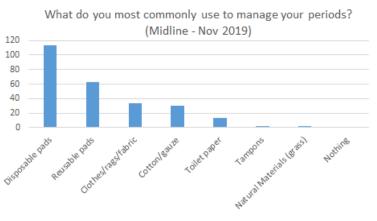
Product (Bfree) Uptake



At midline, 21 out of the surveyed 49 individuals (43%) were using the cup, meaning approximately 57% had not yet tried or used the Bfree cup. The reasons for refraining from menstrual cup usage were fear of pain, irregular periods, and social mentalities surrounding virginity among others. At end line (Feb 2020), another pre-training Menstrual Cup experience survey

was completed which showed a product uptake of 91% (N=58) in comparison to the 57% (N=49) captured at midline (Nov 2019), meaning there was a 34% increase in Bfree usage and acceptability within the two months following the initial follow-up and refresher

training. As performed at baseline data collection, participants were asked which materials they used to 120 manage their period to be compared to baseline results. Illustrated in the graphs adjacent, results demonstrated significant decrease in both the reported use of disposable pads (-54%) and reusable pads (-30.5%) following MHM training and Bfree



Cup Kit distribution. Additionally, the survey showed that introduction of the Bfree cup

completely mitigated the use of less effective and hygienic products (e.g. cotton/gauze and natural materials) among the beneficiaries. This indicates a clear preference for the menstrual cup over other products which is supported by a reported satisfaction (i.e. marking the MC either very comfortable or comfortable) of 100% among the sampled MC users (53 individuals).

Preferred Bfree Cup Sizes

There was a clear preference in menstrual cup size among the users reported during midline and end line FGDs and IDIs. The majority of interviewees were using the smallest cup size (10ml) which they found comfortable and adequate. When probed on the frequency of emptying the smallest size, there was no complaint.

- The most mentioned reason for using the smallest size was the initial fear of the menstrual cup: girls started with the smallest size because they felt it would be the least painful and most likely to enter the vagina.
- Some participants said they had the intention of gradually increasing the size while others gave their sisters, mothers and aunts the medium (15ml) and large (25ml) sized cups.

Three cups proved to be a great advantage that benefitted relatives outside of the project scope. In one end line FGD with 12 beneficiaries from Alere S.S. Four (4) of the Eight (8) reported users had given one of their three Bfree cups to their sister during the school break, and all except for one girl kept the smallest cup for themselves. Another beneficiary at Alere reported she intends to use the Bfree cup kit for 30 years, "I use the small cup for now only until ten years I will use the medium size after ten years and the large one when I have delivered." Thus, the Bfree Cup Kit model showed to both improve access to products within the beneficiaries' communities as well as potentially cover the MHM needs of select beneficiaries for 30 years.

Changes in MC and MH Perceptions

Menstrual Cup Use, Challenges, and Feedback

The cup being a new product, participants were unfamiliar with its usage at baseline; however, there was recognition of the MC among the beneficiaries because of the murals that had been painted on the newly renovated latrines. Initially, most participants had fears and doubts of using the cup, especially due to its size. Following the initial ToB, this perception became increasingly apparent throughout the project as captured during both midline and end line.

At each follow-up visit, challenges and advantages of the menstrual cup were discussed and documented to offer adequate support during the beneficiaries' Bfree trial period. As illustrated below, the challenges and barriers to cup usage reduced following the initial follow-up in November 2019.

Bfree Menstrual Cup Challenges & Barriers at Midline

- Fears of losing virginity.
 - "Some of our friends said the Bfree cup can break our virginity. That's why we did not use it"
- The cup might enlarge the vagina while inserting
- Pain while inserting
 - "I did not continue using the menstrual cup because the first time it was too painful while I was inserting it"
- Peer influence
- Negative parental perceptions
- The cup might disappear in the body

Bfree Menstrual Cup Challenges & Barriers at End line

- Fear of larger sizes
- I do not have any challenges
- Still fears to lose virginity.

Bfree Cup Advantages

- The cup collects a lot of blood which saves time.
- Choice in the size of the cup to use among the three sizes:
 - "I used the bigger cup when I was sitting for exams"
 - "I used the small cup on the first day, but on the second day, blood was too much, so I used the second size."
- Comfortability
 - "You even forget that you're menstruating. You only notice when you have menstrual pain"
 - "You don't feel anything while using the cup, you even forget your menstruating"
 - "It feels comfortable and reduces burning compared to the disposal pads"
- It lasts for ten years there are three cups to last 30 years and no worries about what to use the next 30 years.
- Saves money buying disposable pads, "I like the cup because it is not costly. It even saves time in terms of cleaning compared to pads. It prevents infection because the blood does not go back to the body."
- The cup does not leak

Reduced Stigma of Menstruation

During end line FGDs, there was a noticeable difference in the way menstruation was

discussed among both the boys and girls. Girls at both Alele S.S. and Dzaipi S.S. reported more freedom to discuss menstruation and menstrual health, and end line data showed an increase (+7%) in the number of girls who would speak to their friend about their menstruation. Overall, there was an observed increase in confidence among girls to discuss menstruation even in the presence of boys.

"I feel great about menstruation! It's part of life."

> Jena, Dzaipi S.S. student

Virginity

During the first follow-up visit, girls at Dzaipi S.S. reported bullying and gossip toward girls using the menstrual cup due to perceptions surrounding virginity. Some students still believed the menstrual cup 'broke' the hymen and took away a girl's virginity. Both in the cultural traditions of South Sudan and Uganda, virginity is crucial before marriage, so it is important to understand the concept of virginity and ensure its properly discussed as it can lead to low product uptake. This was addressed and girls were re-educated on the hymen and social construct of virginity. As a result, it was no longer a concern or issue for MC users in the Feb 2020 follow-up, and there was increased Bfree uptake at Dzaipi S.S. potentially correlated to reduce fear of girls' losing their virginity due to cup insertion.

Improved Knowledge on MHH and Menstrual Cup Usage

All female participants at the Training of Beneficiaries (ToB) were instructed to complete a menstrual health pre-test and a menstrual health and menstrual cup post-test. The objective of the tests is to measure improved MHM knowledge, their comprehension of menstrual cup usage, measure knowledge retention of the project, and assess the overall comprehension of training material and tools. The learners - being the primary beneficiaries - were administered both a menstrual health pre-test (Annex 3) as well as a menstrual health and menstrual cup post-test (Annex 4). Blank, incomplete, or illegible tests from each training session were removed from analysis to avoid skewing the results, and therefore, the results are reflective of a representative sample size of participants. Knowledge assessments and analysis are disaggregated below based on the site (i.e. school) and during the IDIs at end line most (90%) of the respondents remember how to use the menstrual cup from the previous training.

Dzaipi Secondary School

Female participants at Dzaipi S.S. experienced a 5% average increase in menstrual health knowledge. Averaging a 64% overall score on the MH pre-test, the group averaged 69% on the post-test following the MHM TOB with 32 out of 67 participants (48%) scoring above 70% of the questions correctly. The girls also showed good overall comprehension of menstrual cup usage following the training and demonstrations, correctly answering 74% - on average of the menstrual cup post-test.

In November 2019, the same MH and MC post-test was administered during the follow-up to measure midline knowledge retention from the initial ToB. The beneficiaries experienced an average 2% decrease in MH knowledge, meaning they retained 98% of the information delivered in the initial ToB one-month prior (Oct 2019). Interestingly, they also averaged a 2% increase in practical MC knowledge which could indicate ongoing learning and education on MC practices within their environments. At end line data collection, they were only tested on MC usage to ensure they continue to use the product safely after project closure. Dzaipi students showed impressive knowledge retention with 39 out of 43 participants scoring more than 80% of the questions on MC usage, cleaning and storage correctly.

Alere Secondary School

Female participants at Alere S.S. demonstrated less initial menstrual health knowledge than students at Dzaipi S.S, but they surpassed Dzaipi S.S. following the training with *an overall* **15% increase in average scores**. As a group, they answered - on average - 76% of the menstrual health and 78% of the menstrual cup questions correctly on the post-test. This demonstrates significant knowledge gained by Alere school girls.

During both midline and end line, they continued to show similar results and good knowledge retention; at project close, the girls average 84.5% on menstrual cup usage, cleaning, and storage at end line, demonstrating the training and follow ups had been successful in ensuring comprehension of the delivered material.

Male Involvement

Male involvement was an important part of the pilot. Seeing that men are majorly the key decision makers in the community as well as in their homes, they can have a big impact on the success of such an intervention and can influence community perceptions on the use of the menstrual cup and on menstruation in general. The male teachers and boys were involved from the initial stages of the project with a necessity to understand what their views and perceptions are on menstruation, and the WoMena male involvement strategy was used.

During initial IDIs and FGDs with both the female and male students, participants noted that it was common for boys to laugh when girls stained their school uniforms with blood at school. Although they understood menstruation happened to every girl, it was perceived as shameful and embarrassing when others - especially a male classmate - saw blood on a girl's skirt. Additionally, both male and female students acknowledged the taboo of speaking to the opposite gender about menstruation, and girls were afraid that boys would know when they were menstruating. At the end line, these mentalities and taboos had disappeared, and girls reported that boys showed more support and understanding. Girls stated they no longer felt they had to hide when they were menstruating, and boys would ask if they were okay during their menstruation instead of making fun of them.

"When I become a father in the future, I will have the information to help my daughter and wife while they are experiencing menstruation"

Male Participant, Dzaipi S.S.

Similarly, although some boys reported feeling embarrassed talking about menstruation at baseline, this was reduced by end line and the boys confidently held discussions on menstrual health topics in the girls' presence. Some menstrual cup demonstrations (e.g. removal and insertion) and period tracking were performed by boys during the final refresher training, and they shared that they can teach the girls how to use

and insert the Bfree cup. They also noted that they can now help girls who are menstruating during school time and appreciated the intervention; there were requests for the project scaleup, and one 20-year-old boy requested a menstrual cup for his wife.

Male Menstrual Health Knowledge

Male peers at both Dzaipi S.S. and Alere S.S. completed a MH pre- and post-test to measure initial knowledge and learning outcomes. Male students at both schools had strong initial MH knowledge, illustrating higher initial comprehension than their female counterparts. At Dzaipi S.S., the baseline average score was 70% correct which increased to 72% (higher than their female peers) following the TOB. Similarly, boys at Alere S.S. increased from a score of 73% to 78% (equal to Alere girls). Both schools showed positive learning outcomes, and follow-up is required to determine why male students have better overall comprehension of menstrual health. A lower sample size of male participants may contribute to an inflated average score, but it is worth further investigation.

Financial Impact on Period Poverty

At both midline and end line, girls described how the cup has helped in reduction of the costs spent to buy disposables. During end line FDGs, one beneficiary said that her household - including her aunt and sister - used to have challenges managing their menstruation, "we did not have access to materials, but now we use the Bfree cups. I use the medium size, and I gave the rest to my aunt and younger sister" At Alere, some girls said that they ask their parents money for buying the pads but instead use it to buy school supplies or food at school. The cup has provided them with freedom to use their pocket money freely. Furthermore, at midline data collection, 7 participants out of a sample of 24 cited the menstrual cup's cost-effectiveness as a reason for liking the product.

School Attendance

Data from the IDIs at baseline with four girls showed that the girls miss 1-3 days of school per menstrual cycle, "I miss three days of school every time I menstruate. I use clothes [products] which I think might leak while I am at school, so I don't come to school. I stay with my step mother, and she tells me to use clothes when I am on period." Furthermore, 25% of the

respondents at baseline also reported their main challenge during menstruation is access to products, and they are not satisfied with the one they are using.

At end line, ten girls from both schools were interviewed from which there was a reported change in school attendance: **60% of the respondents reported not missing any school days after receiving the Bfree menstrual cup.** Boys who participated in end line FGDs also stated and confirmed that after the training for MHM, girls have more routinely attended school in comparison to before.

Finally, management was one of the most remembered topics with 80% of the IDI respondents remembering the different pain management methods which may contribute to decreased absences; however, this was still a challenge for some interviewed participants, and there should be an ongoing focus on menstrual pain management.

Improved Self-Confidence and Comfortability

The fundamental purpose of providing Menstrual education and products is not only to provide the girls with choice of menstrual products but also for them to manage their periods with dignity. From the outcomes at both midline and end line the girls mentioned the freedom that comes with using the product and increased confidence interacting with the boys during their periods menstrual cycle. A sense of freedom was also related to doing different activities like football, being around boys with confidence knowing that there will be no leakage. The girls were happy to be able to use the product throughout the day without changing mostly when at school. "Before this knowledge we used to fear to let other friends know that we are menstruating but now we are free to tell them that we are menstruating - even the boys." They also reported that the cup is easy to use even outside school time and that one can use it for longer hours. They also reported on the lack of the inconvenience of burning of the disposable pads and there not being enough disposable product supply. However, they reported positively on the comfort, no leakages, using the cup for longer hours, and availability of choices in the sizes one had to use.

Additionally, the end line MC experience survey supported the above testimonials and qualitative data. 76% (44 participants; N=58) of respondents stated that they did not feel embarrassed in their last menstrual period, and 95% (55 participants) said they felt comfortable during their last period compared to 72% at baseline. Thus, girls feel less embarrassed or uncomfortable following the TOB and distribution of the Bfree Cup Kit.

INTERVENTION CHALLENGES

Mobilization of the training participants was very poor at Alere secondary school during the follow-up visit due to the poor and delayed communication by the Head teacher. This resulted in the girls leaving for holidays before the follow-up was conducted at midline. Furthermore, at the end line, the Deputy Headmaster was not aware of our visit despite prior coordination with the woman head teacher which impacted end line visit since the boys were not able to be mobilized.

Expectation of money from the project team by the support staff in the two schools. At Dzaipi S.S., the Head teacher expected some money during the follow-up in Nov. 2019 from the project team to pay teachers for their mobilization efforts. They were not paid, and as a result, there was a low turn up of the support TOTs at the end line visit.

At Alere S.S., some unexpected costs in the field were incurred due to beneficiary requests for transport allowance. Girls at Alere S.S. were given 7,000 UGX to transport them back home because they had missed the school transport earlier that day in order to attend the follow-up. This was not communicated to the project team until the end of the follow-up activity.

Misconceptions about the cup by the community and general masses. This was seen from the inception meeting throughout the project cycle which led to low product uptake of support TOTs at midline.

Clashing programs at the schools with the intervention activities. Project activities would depend on the schools' available time to conduct the activities and this was typically in the evening hour which led the project team to rush activities to ensure they were concluded in the available time. The first follow-up session in the two schools was conducted towards the end of school term, so the turn up was very low.

Direct bias from the key gatekeeper of the adolescent younger girls and boys of the school. On several occasions the Deputy Headmaster at Alere SS showed no interest in the project and the product and made a statement that the "cups are not for African girls but for white people".

Minimal Community Engagement and involvement of parents led to low uptake as during the interviews some of the girls reported not telling their parents because they would not allow them to use the product.

LESSONS LEARNED

The importance of involving key gatekeepers to promote the acceptability of the
project at all project levels. For example, IDIs with girls at both schools reported that
the people responsible for filling the water tank did not do it on time and this was due
to lack of knowledge that comes with the relevance of washing hands after using the
toilets.

RECOMMENDATIONS FOR SCALE UP

- Key gatekeepers of the intervention should be involved at the initial stages of the project to promote community ownership and increased involvement of different community stakeholders such as local leaders.
- Continued engagement of the TOTs from the schools (e.g. teachers and administrators) as well as health and district officials in future scale up is essential to strengthen supportive structures at school and ensure project activities are supported by school and government authorities.

- Apart from the TOTs and the support staff in the intervention schools, there is a need to orient other school management in project implementation. Although the Headteacher and the Senior man and women were heavily involved in the pilot, there was difficulty mobilizing because other teachers complained about their time being cut short due to these activities. Thus, they should be informed that the project is benefiting the entire school, not individual users of the product.
- Although there was an overall increase in access to water, girls at Alere S.S. reported
 their water points (i.e. school boreholes) were dirty so clean water was still difficult to
 access, resulting in the girls having to boil or prepare clean water to bring to the
 latrines to wash their hands and/or rinse their menstrual cups. Therefore, in future
 scale up, there should be continue assessment of water points and access to clean
 water to ensure boreholes are providing safe clean water for every beneficiary
 wellbeing.
- At exploration of the intervention area, there is need to understand the school program to mitigate clashing programs.
- Boys at Dzaipi S.S. proposed a Menstrual Health Club for continued sustainability following the intervention. In both schools, the students seconded this proposal and requested to be provided with education materials and T-shirts to provide visibility when they visit other schools and provide information about menstruation.
- There should be an increased focus on pain management in implementation and intervention since beneficiaries reported menstrual pain as a barrier to participation in class.
- The integration of some sort of edutainment into the trainings, brings a fun and youthful aspect to the trainings which encourages further involvement of the participants and ownership of the project.

CONCLUSION

The intervention shows its acceptable in the Humanitarian context with increased product uptake for up to 91% at end line; reported adherence to the hygiene protocol of hand washing after installation of the hand washing facilities and increased support from the male participants especially male students and male teachers. The qualitative results can be further discussed to support the implementation of menstrual health interventions in the same or other contexts.

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