The Perceived Role and Value of Community Health Workers in Addressing Family Planning Uptake in a Rural District in Ghana

by

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Mary Story

Thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science in the Duke Global Health Institute
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ABSTRACT

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Abstract

Community health workers (CHW) play an important role in providing healthcare services in resource-deprived settings. In 2016, Ghana Health Services initiated a national CHW program to expand health services to rural populations. The aim of this study was to explore the perceived role and value of CHWs in the provision of family planning services in Amansie West district in Ghana. This mixed-method study included household surveys with 281 women in the community age 18-49, and in-depth interviews (IDIs) with a subset of 33 participants and with 30 CHWs. The survey included questions on family planning uptake and CHW interactions, while IDIs explored opinions on CHWs' role and value in delivery of family planning. Surveys were analyzed using R studio. IDIs were transcribed, coded in NVivo, and analyzed for emergent themes. Overall, 57% of women reported that they knew a CHW in their area and 34% of them reported having regular contact. Participants identified the CHWs' roles as providing family planning as part of a broader healthcare package through household visits and referrals to government health services. Regarding the value of CHWs in delivering family planning, emerging themes included confidentiality, accessibility, and comfort. Participants recommended the need for an enlarged CHW workforce with better commodities and programmatic support. The findings from this study suggest that both women and CHWs perceive that CHWs play a valuable role in delivering family planning, by serving as a bridge between the community and clinics.

In rural communities where resources are scarce, CHWs are an invaluable part of the broader healthcare system.

Dedication

This thesis is dedicated to my family and friends for always believing in me and pouring love into my life. To my mother: without you, there would be no me. To Ghana, thank you for embracing me with open arms into an experience that will fuel my passion for years to come.

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Lastly, to my DGHI peers, I thank you all for a memorable two years.

1. Introduction

1.1 Task Shifting to Community Health Workers

Task shifting as described by the WHO in 2007 is "the process of delegation or shifting of some tasks to less-specialized health workers."[1] Task shifting involves the redistribution of tasks from highly qualified workforce teams to health workers with shorter training to make better use of available human resources. Introduced in China in the 1920s, the use of lower-level health care providers has grown globally over the past few decades. In 1969, Ghana began to initiate task shifting with the introduction of medical assistants. Although they were initially met with resistance, this lower level healthcare cadre has since been accepted as a source of care.[2] In an effort to address health provider shortages, task shifting from higher cadre health providers to community health workers (CHWs) has become more common. Using these lower-level health workers to compensate for low human resources is an acknowledged way to expand access at the community level for primary health care services including immunizations, maternal and child health support, HIV/AIDS services, mental health, and family planning[3,4,5].

Although shown to be assets to the burdened health system, the formalization of CHWs as part of the broader health care system has required the accumulation of evidence and negotiations with higher-level professionals. The role CHWs play in the financial structure of health care has been studied by the Commission on Macroeconomics and Health, United Nations Millennium Project and the International Task Force on

Innovative Financing for Health[6]. Studies have found that CHW programs cost approximately 5% of the total cost of the primary care system. According to 2011 data, primary health care systems in low-income countries said to cost from $50-$55 US dollars per capita. A study in Sub-Saharan Africa found the cost to provide CHW services to the entire rural population in 2015 was estimated to cost $2.6 billion US dollars[6]. These studies suggest that CHWs can be complementary as a low-cost health care service in settings where there is a human resource crisis.

Investments in communities are key to sustain the efforts of a CHW program. Successful CHW programs are known to leverage the support of the community. To mobilize communities, programs have become embedded through increased participation of community members in community health committees, media campaigns, and various educational campaigns. The Brazilian Family Health Program was one CHW program successful in sustaining social participation through its integration of institutionalized community health committees into their municipal health services making it the state's responsibility[1]. Other programs have utilized faith-based programs, nongovernmental organizations (NGO's), or large scale political transformations[7]. Programs have also involved members in various aspects of the program by including them in the planning stages and by having them identify programmatic targets.

1.2 Family Planning Provision by Community Health Workers

Globally, 214 million women of reproductive age who want to avoid pregnancy are not currently using a modern contraceptive method[7], which contributes to unintended pregnancies, maternal mortality, and unsafe abortions[8]. Several global targets, such as Family Planning 2020 Commitments[9] and the Sustainable Development Goals[10], have been set to address the burden of unmet need for family planning among vulnerable populations. Family planning methods can include both modern and traditional methods; however, access to preferred methods is a key tenet in family planning.

The introduction of CHWs into the provision of family planning services generally include some form of counseling, consultations with women and at times their partners, dispelling of myths, counseling on the range of contraceptive methods, and provision of some methods. The benefits of task shifting for family planning are its ability to free up time for higher–level professionals without lowering quality, providing some of the same products and services that the clinics offer, increasing access and use in rural areas, and reducing the costs of health service provision by targeting people in their home[11]. Depending on context and program logistics, community health workers' ability to provide family planning varies. The delivery methods of contraceptive technologies vary, including household-based distribution of family planning methods (e.g., condoms, oral contraceptives, and injectable methods) and referral to clinics. In some countries, community health workers are only able to provide counseling for family planning and

screening for STI/HIV risks, while in others they can provide more extensive services such as implants and injectables. In efforts to address low contraception use in Tanzania, a mobile job aid given to health workers was implemented to deliver integrated counseling on family planning, HIV, and other STI's. It was successful in registering and counseling 710 users, with 255 choosing to uptake due to the intervention. These workers were able to provide pills and condoms to users while referring them to the health facility for more in-depth services such as HIV testing, pregnancy confirmation, and other forms of contraception.[12]

Kenya is another known country that experiences low contraception use due to inadequate access to services. A 2013 study showed that allowing CHWs to provide injectable contraception proved to be safe, acceptable, and feasible in this setting when trained adequately.[13] Another study in Madagascar saw an increase in uptake of contraceptives when the CHWs were allowed to provide free pregnancy tests to clients.[14] Although these are three similar examples, CHW programs vary tremendously and interventions must be tailored specifically to the sociocultural demographics of the setting. Allowing lower level health professionals, such as CHWs, to address concerns of family planning can prove to be key in overall health system strengthening and mobilization of health care services to rural populations.

1.3 Family Planning in Ghana

In Ghana, the current unmet need for family planning is 30%, which is a 6% decrease from 2008 reports[15]. The 2014 Demographic and Health Survey reports that 99% of women are aware of family planning options, yet only 27% of married women and 45% of sexually active unmarried women report having a met need for family planning[16]. The most common methods of family planning used in Ghana are injectables (6.0%), implants (3.7%), oral contraceptive pills (3.9%), and condoms (2.0%). With contraceptive methods being provided in both the private and public sectors, family planning is not free, but it is inexpensive and available. To address the unmet need for family planning, one study in Ghana looked at antenatal and child wellness clinics to reach mothers and promote contraceptive use. However, the increase in prevalence was only shown to be significant in the urban setting with sociodemographic characteristics, reproductive wishes, contraceptive experiences, spousal communication and FP counseling playing major roles[17]. Finding ways to address these challenges and identify the barriers to access are major goals of Ghana Health Services, especially as a lower-middle-income country with a large rural population.

1.4 Ghana National Health Service

In Ghana, the district health administrations are the main functional unit for family planning management[18]. Although having a relatively strong program, statistics show that uptake of family planning is significantly lagging. Ghana began to look at the

district level in an effort to improve capacity to expand access and consequently utilization of family planning services. The 2000 implementation of the Community-based Health Planning and Services (CHPS) program was one of the first efforts to strengthen health sector presence in the community. The CHPS program had a series of workers established as teams. Each team was composed of a Community Health Officer (CHO) who lived within the CHPS zone and worked out of the Community Health Compound (CHC). Community Health Volunteers (CHVs) and committees worked with the CHOs to support the community and health in the area. However, limited resources and the inability of CHOs to work in the compound and in the homes left a deficit in delivery. To fill the gap, the Community Health Workers program was established as another level of community-level health delivery that would formally visit the households in support of the CHO.

1.4.1 Ghana Community Health Worker Program

Although the CHPS program was successful in Ghana, it was not effective in filling all the gaps associated with health coverage in rural areas. In 2013, the 1 Million Community Health Workers (1mCHW) Campaign was integrated into the CHPS strategy to improve healthcare access through the introduction of CHWs and eHealth. Initiated by the Millennium Promise Alliance and Earth Institute at Columbia University, the Ashanti region was selected as the baseline demonstration site. The Campaign later collaborated

with the GHS to recruit, train, and deploy 20,000 CHWs and 1,000 eHealth technical assistants (eTA) across the 216 districts in Ghana[19].

The success of the 1mCHW program led the Ghana Health Service to nationalize the CHW program. Ghana's National Community Health Worker (CHW) program started in 2016 with a goal of providing universal health coverage to its citizens, strengthening the overall health system, and achieving the Sustainable Development Goals. The CHWs have been tasked with "providing preventive, promotive and clinical health services" to the people of the rural areas of Ghana through home visits that promote healthy living and empowerment[20].

Through the national program, the CHWs are integrated into the CHPS program to assist the CHOs with their work for health promotion, disease surveillance, and treatment of minor ailments by visiting the community members at the household. Each CHW covers a catchment area of about 500 people and is supervised by one to two CHOs, who are centralized at the CHPS zone and clinic. CHWs are between the ages of 18 to 35 and are two-thirds women. Other requirements include that CHWs must have a secondary education, be nominated to serve, be well-known within their respected areas, and spend at least 80% of their time in their communities.

The provision of information about reproductive health and family planning is a key function of the CHWs' efforts of health promotion. Regarding family planning, they are tasked with the provision of education on prevention and management of STDs and

HIV/AIDS and family planning services with referrals. The CHWs are trained to provide counseling on birth spacing, contraception use, infertility, reproductive health, family life skills, STIs, and cancers – all within the framework of informed choice. The CHWs can provide male and female condoms to households but otherwise must make referrals for other methods of family planning.

Other settings have seen success in using CHWs to promote the uptake of family planning. In Ethiopia, the National Extension Worker Program contributed to an increase in contraceptive use by 25%[21], and Madagascar saw a 26% greater uptake of contraceptives after a family planning program was delivered by CHWs[14]. With the expansion of Ghana's CHW program, it is important to understand the impact and value of the CHWs when supporting the uptake of family planning. The aim of this study was to describe and explore the perceived role and value of CHWs in supporting the uptake of family planning and addressing associated barriers to family planning use in Amansie West, a rural district in Ghana.

2. Methods

This exploratory mixed methods study sought to understand the perceived roles and value of CHWs in delivering family planning services in rural Ghana. This study took place between May and July 2018 in the Amansie West District of the Ashanti Region of Ghana. In the quantitative phase, we conducted tablet-based surveys at the household level with 281 women of the CHW program. In the qualitative phase, we conducted in-depth interviews (IDIs) with a sub-set of women who participated in the survey (n=33) and CHWs (n=30) from sub-districts of the rural and peri-urban Amansie West district.

2.1 Setting

The study was conducted in the predominantly rural Amansie West district of the Ashanti Region of Ghana. The 2010 Population and Housing Census reported that over 95% of the 134,331 population was rural. For this study, six of the seven sub-districts were split to create 11 geographic zones. These geographic zones were created to be comprised of either one identified community-based health planning and services (CHPS) zone or 2-3 contiguous CHPS zones that had a potential sample population of at least 100 registered women of reproductive age. The Adubia subdistrict was not included in the study because there were only 30 women who had been registered in the community by a CHW.

2.2 Sample Population

Women of fertility age (18-49) who were registered by a CHW since the inception of the expanded Ghana National CHW program (2016-current) were eligible for

participation in the study. For the initial sample, we randomly selected 30 women per geographic zone, providing a sample of 330. Due to challenges with identifying households, an additional random sample of 75 women was added to reach the study goal of 280. This led to a final sample of 281.

Of the survey participants, 33 women were purposively selected for an in-depth interview, in order to have representation of both unmet and met need for modern family planning. We defined modern family planning in this study to include short-term and long-term methods such as pills, injectables, intrauterine devices (IUDs), female and male sterilization, and implants. Women were ineligible to participate in an IDI if they reported that they were not sexually active, were pregnant, were currently trying to become pregnant, and/or reported being infertile due to sterilization or a hysterectomy. The IDI sample was selected from five of the geographic zones to capture variance amongst the district. After the survey, research assistants completed a brief survey to gauge participants' interest in doing an IDI and fit as a qualitative respondent (e.g., talkative and engaging), which was used to further inform selection.

The 30 CHWs were conveniently sampled from a list of 48 active CHWs within the Ghana Health Service database for the Amansie West District. All community health workers were English speaking and able to travel to the interview site. The final sample included 25 female CHWs and five male CHWs.

2.3 Quantitative Procedures

2.3.1 Recruitment

Women were recruited for participation in this study from a provided list of women of fertility age registered by a CHW since the start of the program. Women under the age of 18 were not included. Using phone numbers and household identifiers, women were approached to participate in the study. Written informed consent was obtained from each participant to ensure that they were aware of the minimal risks of the study. Research assistants were instructed to introduce themselves, the project, and read the consent thoroughly with the participant in the local language, Twi. An informational pamphlet was provided for the participants to keep for personal records with contact information of researchers.

2.3.2 Research Assistants

The surveys were conducted by six research assistants (RAs); all but one had previous experience with conducting survey research. Prior to commencing data collection, the RAs participated in a 3-day training that included the goals of the study, research ethics, navigating the tablet-based data collection platform, and data collection procedures. During the training, the team reviewed every question in both English and Twi and had observed sessions where they practiced collecting surveys on tablets that were recorded and discussed. Training was conducted in both English and Twi, with Twi used as the primary language for mock surveys, discussion, and feedback. Feedback was

provided throughout the entire data collection process, with direct supervision provided by the student principal investigators (Stephens and Schrumpf).

2.3.3 Survey

The survey was developed by Duke University researchers and reviewed by Millennium Promise Ghana to ensure cultural appropriateness. Survey questions were translated into Twi by the Millennium Promise Ghana team. The survey was composed of 11 sections, but for this analysis, only five sections were used.

Surveys were conducted in a mostly private setting, such as at the household or at the women's place of work, by Twi-speaking enumerators. The surveys were orally administered, with responses entered directly into a tablet-based Qualtrics application. The tablet-based survey was available in both English and Twi in case the enumerator needed to toggle between languages for clarification; Twi was the primary language of administration. After each survey, participants received a small household gift for participation.

2.3.4 Measures

Demographics. Six questions collected information about the women's age, education, occupation, relationship status, and religion.

Pregnancy History and Status. Four questions asked about the number of live children that the women had given birth to, their current pregnancy status, sexual activity over the past three months, and any history of hysterectomy.

Pregnancy Status and Intentions. A single question was used to determine whether the women intended to become pregnant within the next few months (no, yes, and already pregnant). Although we considered women who were pregnant to have a met need, we excluded them from analysis.

Contraception. A series of questions were asked to assess whether the woman was using any method to prevent pregnancy. Methods included injectables, implants, condoms, pills, intrauterine devices (IUDs), implants, emergency contraceptives, herbal/traditional methods, female sterilization, male sterilization, lactational amenorrhea, withdrawal, and calendar method. For analysis, we considered injectables, implants, pills, IUDs, female sterilization, and male sterilization to be modern methods. Condoms were not included due to limitations in documenting consistent use during every sexual interaction.

Relationship with CHW. Sixteen questions were asked to gauge the quantity and quality of CHW interactions that the women experienced. These included questions on the characteristics of the CHWs (age and sex), CHW visits (frequency and time spent), relationships with CHW, and knowledge that the CHWs seemed to have.

2.3.5 Data Management and Analysis

Surveys were collected offline due to internet access and later uploaded onto the Duke Qualtrics platform. Data were reviewed daily for quality control. Consent forms

were scanned and uploaded onto the secured Duke Box platform. All identifiable information, including consents, were left in Ghana or deleted prior to leaving Ghana.

Management and analysis of the data were completed using Microsoft Excel and R Studio. This process was completed in three steps. First, data cleaning was completed in Excel to ensure that the data were sufficient for analysis, and that ineligible or duplicate survey entries were removed. The original database had 290 entries, which was reduced to 281. After importing the data into R Studio, further cleaning was done to create a more comprehensible dataset.

Second, descriptive statistics were used to describe the characteristics and demographics of the women. These descriptive statistics also involved creating a dichotomous outcome of met need for family planning (1) and unmet need for family planning (0). Met need in this study was defined as meeting any one of the following criteria: using a modern contraceptive method; currently pregnant or actively trying to become pregnant in the next six months; not sexually active in the past three months; or having had a hysterectomy. Unmet need in this study was defined as being potentially fertile (no hysterectomy), sexually active in the past three months, not actively trying to become pregnant, and not currently using a modern contraceptive method.

Third, we examined bi-variate associations of the independent variables of interest. These include demographics (education, women's age, religion, and relationship status) and the level of CHW interactions (level of interaction and types of communication

with CHW). For analysis of the impact of CHW interactions with women having a met and unmet need, the sample was reduced to include only the 159 women who reported knowing a CHW in the area. Categorical variables were analyzed using Fisher's Exact Test of Independence and continuous variables were analyzed using two-sample T-tests.

2.4 Qualitative Procedures

2.4.1 Beneficiary IDIs

2.4.1.1 Recruitment

For the women IDIs, women were identified based on their responses to the survey. Women were purposively sampled to fit into three categories based on their unmet or met need for modern family planning, with a target of 5-10 women in each category. These categories were currently using a modern method, not currently using a modern method, and not currently using a modern method but used one in the past two years. Using the eligibility criteria, women were selected to be recruited for the IDIs. Women selected for an IDI were called or approached at their home for an invitation to participate in an IDI.

A separate written informed consent was obtained from each participant to ensure that they were aware of the minimal risks of the study and to seek consent for audio recording of the interviews. Research assistants were instructed to introduce themselves, the project, and read the consent thoroughly with the participant in the local language,

Twi. An informational pamphlet with the contact information of the research team was provided to all participants.

2.4.1.2 Research Assistants

In-depth interviews for the beneficiary population was conducted by three female community health nurses from the surrounding communities. The interviewers received a five-day training on qualitative methods and research ethics. The training included the goals of the study, interview procedures, and observed practice interviews that were transcribed and reviewed. Training was conducted in both English and Twi, with Twi used as the primary language for discussion and feedback. Feedback was provided throughout the entire data collection process, with direct supervision provided by the principal investigators.

2.4.1.3 Interview Guide

Women IDIs were conducted over a five-day period using a semi-structured interview guide. Most of the interviews were conducted at the woman's household in mostly private settings (in some cases, participants' children were present). Some interviews were conducted at the woman's place of work (e.g. market or a small shop). Interviews ranged from 10-60 minutes depending on the depth of discussion.

The IDI guide (Figure 1) was divided into eight sections, which included opening questions followed by specific probes. The IDI guide was created by the Duke University research team and reviewed by the Millennium Promise team to ensure contextual

appropriateness and face validity. IDI guides were not translated into Twi, in order to give the interviewers liberty to phrase the questions as they saw fit for the context. This method was addressed and tested during training. Research assistants were instructed to use probes as needed and were instructed to follow the flow of conversation. Sections also included question pathways dependent upon previous answers to reduce repetition. After the in-depth interview, women received a small household gift for participation. The research assistants wrote field notes after each interview to highlight findings or to address concerns in the interview guide.

IDI Guide Sections

1. Introduction
2. Perspectives on Family Planning
3. Barriers to Family Planning
4. Relationship with CHW
5. Experiences with CHW
6. Discussions with CHW about Family Planning
7. Opinions of CHW Program
8. Conclusion

Figure 1: Beneficiary IDI Guide

2.4.2 CHW IDIs

2.4.2.1 Recruitment

Using the database of registered CHWs in the Ghana Health Service, Millennium Promise Ghana provided a list of about 40 CHW names from the 48-known active CHWs in the Amansie West District with available contact information to be used as the sample.

A total of 30 CHWs were conveniently sampled based on English comprehension and availability to travel to the interview site. Potential participants were approached via phone by Millennium Promise Ghana staff or in person by other CHWs and invited to participate in the IDI on a specific day.

Written informed consent was obtained from each participant prior to the start of the interview. English-speaking research assistants reviewed the information packet with participants and gained permission to record the interviews. All participants were given the reviewed information pamphlet to keep for personal records with contact information of researchers.

2.4.2.2 Research Assistants

The research assistants for the CHW interviews were graduate student researchers from Duke University. They had training in ethics and qualitative methods through coursework and prior experience. Researchers were mentored by a Duke faculty mentor who had expertise in qualitative methods.

2.4.2.3 Interview Guide

CHW interviews were conducted in English over a four-week period using a semi-structured interview guide. The interviews took place in a private setting at the Millennium Promise Ghana office or at a community health post. All but six interviews were conducted fully in English. Six interviews had a Millennium Promise translator present due to language barriers. The translators were male, fully bilingual, with no prior

experience in qualitative interviewing. All, but one, interviews were audio-recorded. For the participant who declined audio recording, detailed notes were taken during the interview. Interviews ranged between 30-120 minutes, depending on the depth of the conversation.

The CHW IDI guide (Figure2) was divided into nine sections and contained opening questions and a list of probes that interviewers used to follow the flow of the conversation. The IDI guide was created by the Duke University research team and reviewed by the Millennium Promise team to ensure contextual appropriateness. After the in-depth interviews, participants received a small household gift for participation and money for transportation costs. Field notes were completed by the research assistant after each interview.

CHW IDI Guide Sections

1. Introduction
2. Experience being a CHW
3. Perspectives on Family Planning in the Community
4. Role of CHWs in Supporting Family Planning
5. Personal Experiences Supporting Household Use of Family Planning
6. Perceived Impact of CHWs on Family Planning Uptake
7. Personal Experience
8. Additional Opportunities for CHWs to Improve Family Planning Uptake
9. Conclusion

Figure 2: CHW IDI Guide

2.4.3 Qualitative Data Management and Analysis

Audio recordings and field notes were uploaded daily to a secure file sharing program (Duke Box). The audio recordings of the women's interviews and the CHW interviews conducted in Twi were sent to a Millennium Promise staff member for simultaneous translation and transcription into English. All other CHW interviews were transcribed by the principal investigators. The final transcriptions, with identifiers removed, were stored in Duke Box. Five of the women who were interviewed were excluded from analysis due to lack of interactions with CHWs, making the total included in the study 28 women.

Data were analyzed using an inductive thematic analysis approach[22], which involved multiple analytic techniques that allowed for a better understanding of the data. As a first step, interviews were read thoroughly, and document summaries were created to highlight key points and arising themes related to the research questions. Using the memos and summaries, three themes were identified, which were included as parent codes. Child codes were then identified under each parent code to identify emerging sub-themes. After identifying the themes, a codebook was generated, which included descriptions of the codes, examples of coded text, and exclusion criteria. The codebook was reviewed by peers for input prior to commencing coding. Data analysis was structured around the three themes: the perceived roles, perceived values, and recommendations for CHW provision of family planning.

All transcripts and memos were uploaded onto Nvivo 12 for organization and coding. The transcripts were coded to follow the structured codebook, and representative quotes were pulled out by code for analysis and reporting. Analyses included queries and memo writing that synthesized data. Reflection memos were written throughout to reflect, describe, and document the data analysis process. Researchers maintained field notes throughout the data collection process that were used as supplementary material. These providing detail and contextual information on data collection processes and information on emergent themes. Peer input was received throughout the analytic process, including input on the memos, codebook, and queries.

2.5 Ethical Approval

Ethical approval for the study was received from the Duke University Institutional Review Board and the Ghana Health Service Ethical Review Committee.

3. Results

3.1 Description of Sample

3.1.1 Women Participants

The sample of 281 women were between the ages of 18 - 49 with a mean age of 31 (Table 1). The majority (86%) of participants had attended some level of school, with 45% having at least completed junior secondary school. Most women were either married (40%) or in a relationship (49%). Women reported having on average 1.5 children. While 28% of women did not have income generating activities, women in this community tended to work as farmers (n=93) and traders (n=56). The majority reported being Christian (78%), with a small number being Muslim (5%). From the sample of 281 women, 159 (56%) reported knowing a CHW in their area.

The subset of 28 women who participated in the IDIs had a similar profile as the larger sample, ranging in age from 18 to 46. Ten of the women were not currently using a modern method, five were not currently using but had used in the past years, and 13 were currently using a modern method.

Table 1: Description of Sample

Women Demographics (n=281)		
Age		
	n	**%**
18-25	96	34%
26-35	109	39%
36-45	55	20%
46+	21	7%
School Attendance		
Never Attended	40	14%
Primary	71	25%
Middle/JSS/JHS	127	45%
Secondary/SSS/SHS	41	15%
Higher Level	2	<1%
Relationship Status		
Married	114	40%
In a Relationship	137	49%
Single	30	11%
Income Generating Activities		
Farmer	93	33%
Teacher	2	<1%
Trader	56	20%
Food Vendor	15	5%
Housewife	3	<1%
Health worker	2	<1%
Seamstress	12	4%
Hairdresser	14	5%
Other	5	<1%
None	79	28%
Children (mean, SD)		
	mean	**SD**
Girls	1.63	1.44
Boys	1.41	1.27

3.1.2 Community Health Workers

The sample of 30 CHWs who participated in in-depth interviews ranged in ages from 20 to 35. The sample included 25 women and 5 men who had been working as CHWs

between two to seven years. All of the CHWs were currently living in the communities where they worked, and majority of them were originally from the community. The motivations for becoming a CHW ranged, but most stated that they decided to become a CHW for financial reasons or because they wanted to help their community. Financial reasons included unemployment, financial instability, and wanting to gain money for future education. The CHWs stated that they were motivated to help their communities to progress toward social and health goals, as described by this CHW.

> *"…and there are a lot of problems especially sanitation problems and they have less knowledge about the family planning …and upon that I was also willing to help the people to live in a hygienic condition and also to embark on family planning so that the birth rates would decrease so that the children they have they can cater for them. So that it could reduce the cost of the family and Ghana as a whole. These are some of the reasons I chose to become a CHW." CHW, Male, 28 years old*

3.2 Quantitative Findings

3.2.1 Met and Unmet Need for Family Planning

Of the 281 women who participated in this survey, 146 had no need for family planning because they were either not sexually active, currently pregnant or trying to become pregnant, or infertile due to a hysterectomy. Of the 135 women with a need for family planning 42 (31%) were using a modern method of family planning, and 93 (69%) were classified as having an unmet need for family planning (Table 2). The modern methods used amongst women who were using family planning methods were injectables (n=25), implants (n=16), pills (n=11), female sterilization (n=13), IUD (n=1), and male

sterilization (n=1). Some women reported the use of more than one method, including traditional and non-modern methods. When comparing the 93 women with an unmet to the 42 women with a met need, their ages and knowledge of a CHW in their community were similar. However, women with some level of education were 10% more likely to have an unmet need. Table 3 shows the differences in demographics between women with met and unmet need for family planning.

Table 2: Defining Unmet and Met Need

Description of Family Planning Need (n=281)		
	n	**%**
Unmet Need	**93**	**33%**
Met Need due to Modern Methods*	**42**	**15%**
Injectables	25	8.9%
Implants	16	5.7%
Female Sterilization	13	4.6%
Pills	11	3.9%
Intrauterine Device	1	<1%
Male Sterilization	1	<1%
Excluded*	**146**	**52%**
Not Sexually Active	60	21.4%
Pregnancy Intentions	46	16.4%
Pregnant	26	9.3%
Hysterectomy	25	9.3%
* Factors are not mutually exclusive considering some women reported using a method and/or multiple exclusion criteria		

Table 3: Comparing Met and Unmet Need (n=135)

	Unmet Need	Met Need	
	n=93	n=42	Fisher's Exact
Age			
18-25	31 (33%)	17 (41%)	$p = 0.711$
26-35	40 (43%)	19 (45%)	
36-45	17 (18%)	5 (12%)	
46+	5 (5%)	1 (2%)	
Education			
None	8 (9%)	7 (17%)	$p = 0.235$
Some Level	85 (91%)	35 (83%)	
Relationship Status			
Married	39 (42%)	20 (48%)	$p = 0.557$
In a Relationship	53 (57%)	21 (50%)	
Single	1 (1%)	1 (2%)	

3.2.2 Interactions with CHW

Of the sample of 135 women, 81 (60%) reported knowing a CHW in the area. About a third (38%) of the women who knew a CHW had regular contact with them, defined as having had 3 or more visits over the past six months. Most women (65%) reported that their CHW visits ranged from less than 30 minutes. The CHWs that were referenced by the women were majority female (90%) and between the ages of 23 and 30 (71%). Among women who knew a CHW, 43 (53%) reported that they had ever discussed family planning with a CHW, and 7 (9%) reported knowing that a CHW also discussed family planning with their partner. Of those who reported family planning discussions with the CHW, 13 (30%) reported that they had these conversations three or more times over the past six months.

Of women who knew a CHW in their area, 71 (88%) reported that they trusted their CHW to keep their conversations confidential, 65 (80%) agreed that their CHW was knowledgeable in family planning, and 70 (86%) were comfortable discussing family planning with their CHW. When asked specifically about their relationship with the CHW, 76 (94%) felt their CHW knew them well, 75 (93%) looked forward to seeing their CHW, and 71 (88%) trusted that their CHW provided good information. Of 20 women who reported that they had a relationship with the CHW outside of their professional relationship, 9 were friends and 8 were family members. Ultimately, 62% of women agreed that the CHW was helpful in meeting their family's health needs.

Table 4: Comparing CHW Contact between Met and Unmet Need (n=135)

	Unmet Need	**Met Need**	
	n=93	n=42	Fisher's Exact
Know a CHW			
No	40 (43%)	14 (33%)	p =0.345
Yes	53 (57%)	28 (67%)	
Have regular Visits from a CHW			
No	51 (55%)	20 (48%)	p =0.462
Yes	42 (45%)	22 (52%)	

3.2.3 Associations between CHW Interactions and Family Planning Use

A total of 81 women were included in the analysis examining the association between CHW interactions and met need. These were women who were not excluded from the met need calculation and who knew a CHW in their area. In examining all of the possible associations, none were significant (Table 5).

Table 5: Comparing Met and Unmet Need amongst CHW interactions (n=81)

	Unmet Need	**Met Need**	
	n=53	n=28	Fisher's Exact
Discussions of Family Planning			
No	26 (49%)	12 (43%)	$p = 0.645$
Yes	27(51%)	16 (57%)	
Trust CHW to Provide Good Information			
No	7 (13%)	3 (11%)	$p = 1$
Yes	46 (87%)	25 (89%)	
Trust CHW to Keep Conversation Confidential			
No	8 (15%)	2 (7%)	$p = 0.481$
Yes	45 (85%)	26 (93%)	
Believes CHW is Knowledgeable about Family Planning			
No	13 (25%)	3 (11%)	$p = 0.441$
Yes	40 (75%)	25 (89%)	
Comfort Discussing Family Planning with CHW			
No	9 (17%)	2 (7%)	$p = 0.314$
Yes	44 (83%)	26 (93%)	

3.3 Qualitative Findings

3.3.1 Perceived Role of CHWs in Family Planning Use

Both the CHWs and the community of women perceived that the role of CHWs in the Amansie West District was to provide healthcare knowledge through household visits, in order to promote improvements in overall health outcomes. Providing information and referrals related to family planning was seen as an essential part of the overall health package that CHWs provided to households. Although uptake cannot be described in this study, some CHWs reported that they perceived their household

conversations about family planning led to an increase in uptake of family planning services at the clinic.

3.3.1.1 Provide a Broad Healthcare Package

CHW interactions and exposure varied throughout the communities. With a programmatic target of pregnant women and children under five, CHWs were provided a geographic area and charged with approaching households to enroll people who met the target and register their entire household. CHWs generally reported having 150 or more households registered, whom they were supposed to visit at least once a month. Most women described their CHW interactions to vary from multiple times a week to monthly. During the household visits, CHWs said they were expected to discuss one or more topics from a larger healthcare package, including sanitation, hygiene, nutrition, water purification, malaria prevention and treatment, family planning and other health issues.

> *"When I go there, I know this morning I'm going to teach family planning or I'm going to teach sanitation, or I'm going to teach breastfeeding. When I go there, I greet and ask everybody what they are feeling, or I start to ask what is sanitation. Besides that, I will check the environment … If the toilet, the place is no good, I will tell them this place is no good for you. I teach all of them, that's why you got maybe vomiting or something else. Before I went with them to talk, I already have a list of topics I'm going to teach, and I have them ahead of time." CHW, Female, 26 years old*

3.3.1.2 Family Planning as Part of the Healthcare Package

Although part of the larger package, all participants mentioned family planning as a key topic of discussion for household visits. CHWs discussed prioritizing family planning discussions at households where the children were closely spaced, where there were many children in the household, and for young mothers or teenagers. Family planning was described as a method to space births, provide more economic opportunity, decrease rates of abortion, and improve health of women and children.

> *"When we go do the visit, when we will see your children are more than five or three. When we see it when we come to your house, I change the topic for family planning." – CHW, Male, 24 years old*

Discussions of family planning included general advice on the advantages, the various methods, and the benefits of use. Although CHWs were unable to directly deliver family planning services, participants said that discussions about family planning sometimes were determining factors for their uptake or continued use of family planning methods. Other discussions with CHWs helped women to gain more factual knowledge about family planning methods.

> *"She told me that if I want to do the family planning, I could go to the clinic where the midwife will do it for you. Also, she gives me information regarding family planning, about the methods for me to decide which one I want. I told her I want the 1-month injectable method and when I visited the clinic, the nurse explained to me exactly as the CHW told me and checked my weight and vitals and did the family planning for me." – Beneficiary, 23 years old, currently using*

These household visits sometimes also increased men's knowledge and willingness to allow their wives to use family planning. Although few, some women

discussed times when their husbands welcomed family planning conversations with CHWs. CHWs also highlighted the few times they were able to have successful conversations with male partners about family planning.

> *"Some lady's husband came and informed me that he wants his wife to do family planning, but because of the religion that his wife is in, they don't give [permission]. But the husband wants his wife to do it…. So, I advise the wife to accept what the husband is saying. Maybe he is not having money, so he wants to care for those [children] that she has given birth to." CHW, Female, 23 years old*

In discussing family planning with households, CHWs must often dispel the myths and rumors that serve as barriers to women's use of family planning. The beliefs and perceptions of traditional medicine sellers on negative side effects associated with different methods were common discussion points. The types of side effects that were described as concerns were infertility, hypertension and other heart problems, changes in menstruation, dizziness, fluctuations in weight, and fibroids. Through these home visits, the CHWs can answer questions, resolve doubts, and encourage uptake for the long-term benefits.

> *"Yes, when a woman is not menstruating, they think she's sick and she can get fibroid. That is why they fear to do the family planning. But as it now, they don't fear anything if I talk to her "Oh Madame, you have to do this. It will prevent you, it will help you to get chance to look after the one you first give birth to so and it will help you to distance your birth so that you will get money to do what you want to do." So now they take my advice and I assure you *claps* 70% of my women in my community they did family planning." – CHW, Female CHW, 26 years old*

Some participants reported that they would be convinced of the benefits of family planning in a single visit. However, most participants reported that having the conversation repeatedly with CHWs increased their confidence and helped them decide to start or continue to use family planning methods during times they were ambivalent.

> *"If I don't understand … the family planning, I talk to her for her to advise me on the effects on the injectable method and if I decided to stop using it, her explanation encourages me to continue using it." Beneficiary, 40 years old, Not currently using but has used in the past two years*

3.3.1.3 Linkage to Government Health Services

Oftentimes serving as the only verified source of health knowledge in a community, CHWs act as the gateway to the broader health system. The clinical roles of the CHWs are limited to providing malaria tests and administering simple first aid; otherwise, they are tasked with providing information and referring community members to government health care services as needed. For family planning, CHWs provide education and advice related to family planning methods, and thereafter refer women to the community clinic to be serviced by the community health officer and/or nurse (CHO/CHN). Once referred, the CHWs can continue to follow-up with the women at the households to make sure that the woman links to the clinic and that the method is working well for them.

> *"I'll tell (a woman): 'When you go to the [clinic] do for family planning, I can take you to my CHO, and my CHO will give you [family planning]. It will help*

you to go to school. When you do it, it can help you to go for nursing training and it can help you to do some work.'" – CHW, Male, 24 years old

The CHO(/N) plays a crucial role in the community as the primary health care provider at the clinics and therefore the primary referral point. As the immediate supervisor of the CHWs, the CHO(/N) are charged with providing supervision and support to the CHWs in their communities. Having a relationship with a CHO(/N) acts as a direct resource and linkage for community members.

"I always advise them to go to [clinic]. That way if you get any problem, you go and inform the nurse. If you go to drug store and buy the medicine and get problem from them who are you going to inform? So, I always advise them (to use the clinic)." – CHW, Female, 22 years old

3.3.2 Perceived Value of CHWs in Promoting the Use of Family Planning

Family planning in the Amansie West district was described as a highly sensitive topic that was not freely discussed in the community. Having CHWs accessible, confidential and ready to advise women on family planning was seen as a way to facilitate discussions and decision making related to family planning. By providing knowledge at the household level, it allowed the women to make reproductive decisions that were best suited for their own perceived benefits. However, CHWs reported resistance in the communities from women and household heads, which impeded their ability to provide services.

3.3.2.1 Accessibility

With access to healthcare services being a major issue in rural settings, CHWs were valued in their ability to be a community-level healthcare resource. Living in the community and frequently visiting the households, they were seen as making health care more accessible to the community. These frequent household visits allowed women to become more knowledgeable about the benefits of family planning and able to make decisions regarding their family planning choices.

> *"I like the fact that I can meet and talk with community members about health issues because for some pregnant women, when they visit the clinic and they are given medications, they will not take them. But when you visit them and talk to them, then they take the medications. We also make sure they have taken the medications before we leave and that promotes good health for them. Also, there are some people when you do not go to them frequently, they will not take things seriously, but when you go to them frequently, they can share their problems with you without fears. So, I am happy to work as a Community Health Worker." CHW, Female, 27 years old*

Participants described times when they were having health concerns and were able to have them addressed quickly by a CHW. Being able to call or even visit the CHW's house allowed the women and families to gain more knowledge to be able to address their family's health issues.

> *"I do not have the contacts of the CHWs, but as I said one of them lives close by in my area and she passes by in front of my house to fetch water. So, when I need something, I just pay them a visit." – Beneficiary, 37 years old, currently using*

3.3.2.2 Comfort

Accessibility and comfort seemed to connect as values within the discussions. Having frequent contact with CHWs in the community who were knowledgeable in health care allowed the women to feel more comfortable. This comfort allowed the space for more open dialogue. With the majority of women working as farmers or traders, they described leaving for work early in the morning and having to tend to the household at night. With busy schedules and other obstacles, some CHWs reported that making time to talk about their health was sometimes a burden for women with household responsibilities. However, many women stated that they were open to having the CHW come by because they were comfortable and trusted the person to provide useful knowledge. Building relationships with the women was identified as a strength for the CHWs in being able to address family planning issues.

> *"An ordinary person cannot come to a house and say they are coming to counsel on family planning …. It makes them trust you that, as for this man, we know him, and he has been working here for this number of years and we meet him at the Child Welfare Clinic (CWC). So, when he tells you anything you have to take it serious because it is true. I am from the Ghana Health Service and that makes them trust me." CHW, Male, 28 years old*

Although the primary target of services was pregnant women and children under five, the CHWs still registered the entire household and provided healthcare education throughout the household. Being able to establish relationships with the entire household left everyone informed and led to more comfort in discussions. Highlighted in the quote

below, this household level comfort and familiarity played a key role in allowing the CHWs to be effective in their work.

> *"Because the CHW stays in this community, my husband or partner knows her, so he knows we are talking about something important when the CHW visits me. He even advises me to take my time and explain things to the CHW so that she can also help me. So, he allows me to talk to her any time." – Beneficiary, 20 years old, currently using*

3.3.2.3 Confidentiality

CHWs were highly valued in the community as being a confidant to women. Providing a safe space to discuss health concerns and receive credible information regarding their health seemed to rank highly among women. Many women stated that within their community, they had to be careful about discussing personal matters because it would become "public knowledge," but they did not have that concern with CHWs. Confidence in the CHW was discussed in terms of knowledge of topics, their commitment to not sharing sensitive information, and the privacy that they maintained with certain topics, especially family planning.

> *"I talk to her because she is very free with everyone and I haven't seen her have an altercation with anyone because she gossiped about that person. She always told me at the beginning that even when she visits me and sees something, she cannot share with her colleague CHWs because the family planning is a secret thing." – Beneficiary, 27 years old, currently using*

In some instances, CHWs were the only people who knew that women were using family planning, even when women were married or had partners. Being able to keep family planning use a secret and discuss concerns in a discrete manner was seen as a

benefit of the CHW model. Some women and CHWs even reported that they would have to seek out the CHW at late hours to get guidance on family planning to ensure their partner did not find out.

> *"I have a lot faith in her, because even though I have told her I am still using the family planning and I haven't told my husband, she has been able to keep that secret and my husband hasn't found out up to date, and I haven't heard it anywhere in the community that I am still using family planning." Beneficiary, 40 years old, not currently using but has used in the past two years*

3.3.2.4 Respect

CHWs were highly respected by the women, who called them names such as "*Madame*" and "nurse." This respect appeared to open the door for conversation and allow CHWs to discuss the sensitive topic of family planning. Respect was associated with having knowledge and being a reliable source of information. This proved valuable in changing the beliefs that prohibited uptake of family planning methods.

> *"Because as it now, if I enter town, they call me "Oh, Madame, how is work?" and I said, "Oh, I'm cool." And they respect me a lot. They respect me." – CHW, Female, 26 years old*

Respect in this district seemed to go both ways. Both CHWs and women felt that respect was an essential trait that impacted the household interactions.

> *"When we say someone is knowledgeable and experienced, respect is part of it and the way they talk to us with respect and have patience for people. The way they teach us to understand certain things, I think they are very knowledgeable." – Beneficiary, 26 years old, currently using*

3.3.2.5 Gender

With a small population of male CHWs in the community and study, there was limited information about the role that a CHW's gender played in women's decisions for family planning. For those with female CHWs, some women expressed that having a woman CHW made the discussions about family planning easier. However, the male CHWs did not mention their gender being a hindrance in their facilitation of family planning discussions. The male CHWs spoke about having an advantage of being able to communicate family planning with the male partner, which may have been more challenging for female CHWs.

3.3.2.6 Negative Perceptions of CHW

Even though CHWs were discussed as valuable in the community by the women in the sample, CHWs reported described resistance to their workforce. Some CHWs described either hearing about or experiencing people not welcoming them into their homes, yelling at them, or not trusting them. The sensitivity of family planning, particularly by male partners, was described by one CHW: "The husband knows that you are the one (talking about family planning), and they insult you… They say that you are the one encouraging our wives to do family planning, (and) give them diseases."

Additional resistance was reported about the household visits. With high family and financial responsibilities, the timeliness of the visits was seen as an inconvenience to some women. CHWs reported that women would sometimes request household supplies

or money in exchange of the time spent accommodating the CHW during the home visits. These points further emphasized the importance of the CHW program having the buy-in of the broader community and of the CHWs establishing positive relationships within the household.

> *"Eh, some (women) are difficult because they want to go their work. When you come there early in the morning, they will say oh, they are ready to go. We need money to cater for our children, so we need money. So, you have come here without nothing. What are you coming to do? You just come to tell us we should do the family planning. We should keep our environment clean and others." - CHW, Female, 32 years old*

3.3.3 Suggestions to Improve CHWs' Role in Family Planning

There were several recommendations made to help improve the reach of the CHWs in the district, in order to increase family planning uptake. Increasing the CHW workforce, starting the program with community introductions of the CHW, and providing more commodities at the household level were the three recommendations that arose in the interviews with both CHWs and women. In addition, CHWs mentioned the need for additional programmatic support and training. Although often expressed as general recommendations, these recommendations were seen as important to improving family planning support.

3.3.3.1 Increased CHW Workforce

Participants, both women and CHWs, expressed throughout the interviews that they felt that the heavy workload experienced by the CHWs seemed to limit their ability

to visit the households more often. They advocated for additional CHWs to be added to the community to increase the contact with households.

> *"I think in the community I'm the only one. The community is big. If next time maybe 2 or 3 [CHWs]. I think it will help the community so that everyone will get [care]. As you see sometimes, I go to someone's house once a month, I think it won't help. If we were two people and the community is divided so I think one will go to the house like 3 or 4 times a month." CHW, Female, 21 years old*

3.3.3.2 'Durbar' Community Introduction

CHWs discussed that when they initially started two years ago, they were met with resistance at the households and some discussed that they continued to be seen with suspicion by some community members. Some CHWs even stated that men and women would not open their doors or discuss family planning. Yelling and being ignored was also talked about in a few interviews. They felt that they would benefit from an official introduction to the community as health workers, so that community members would be more open and willing to having discussions about their health with them. CHWs felt that having an initial introduction would be especially helpful for sensitive issues like family planning and would allow them to build trust with households more quickly.

> *"Yeah, to introduce you to the community and tell them 'Oh this is [NAME]! She is doing this, she is doing that. So, you have to when they come to your house, you have to accept her like your sister, your brother and so on forth.' But that didn't happen, so I found it difficult in the first day. But oww, its now okay." – CHW, Female, 26 years old*

3.3.3.3 Commodity Provision

The secrecy and stigma surrounding family planning seemed to have an impact on family planning use in the district. For this reason, both women and CHWs suggested

that contraceptive products should be available directly at the household, rather than requiring a visit to the healthcare facility. The two main reasons that participants preferred household delivery of family planning methods was due to a fear of gossip at the healthcare facility and the costs related to traveling to the facility. Allowing the CHWs to provide products to women at the household was discussed as a recurrent recommendation.

> *"The CHWs who visit us in our homes should be given the commodities or methods so that when our time is due for the injection, they can readily give it to us in our homes to prevent other people from identifying people who are using the family planning. You may want to hide the fact that you are doing it but because when your time is due, you have to walk all the way to the clinic holding your family planning card like a pregnant woman for everyone to see. Also, some people are shy to go to the clinic and do the family planning, so if the CHWs are given the commodities or the methods, those people can have access to them in their houses." Beneficiary, 40 years old, not currently using but has used in the past two years*

3.3.3.4 Programmatic Support

Programmatic support was discussed mostly in relation to CHWs having better phones, consistent pay, and transportation. They complained that the phones and software provided tended to die or stop working, which limited their ability to work throughout the community. The pay was described as not always coming on schedule, which impacted the CHWs who depended on the stipend as their only source of income. CHWs' inability to work other jobs due to time constraints and the inconsistency in pay impacted their livelihood and contributed to poor retention amongst the CHW cohort. Lastly, with communities varying in size, CHWs were expected to travel on foot or pay

for transportation themselves. Implementing travel expenses into their stipend was proposed.

> *"Yes, because we were 105 [CHWs], many people have stopped because of the condition that we are going through. And right now, I think we are left with 72 or 52 because of what we are going through. I think our salary is ($54). 54 dollars a month and it's too much for someone to be a community health worker and take like 54 dollars a month. If they increase it many more people enjoy it." CHW, Male, 24 years old*

One CHW mentioned the need for better monitoring of the CHW program. With inconsistencies in experiences with CHWs and retention challenges, it was suggested that increased monitoring and evaluation would be useful for the overall program.

> *"… I have to say it in that way if you are doing work and you don't have a good monitoring, how are you going to see the work? I will do it as I wish, nobody is coming there to have an assessment on whether I am doing the work or not. …So, you have to have monitoring and evaluation that you come out day in and day out and check tools that you use to do the work. And all of this will boost up family planning and increase the number that does family planning which will help my community do shift on a good thing." CHW, Female, 23 years old*

3.3.3.5 Training

Finally, training was discussed in various ways throughout the interviews. CHWs reported that they received different amounts of training throughout the two-year program. While some CHWs stated that they only had the initial two-week training, others reported additional training workshops provided throughout their tenure. Some stated that training was not long enough and preferred extended training on topics, such as family planning, or periodic workshops throughout their contract. More consistent and continuous training for CHWs was recommended.

"It prepared me well. But ummm…they train us I think to do our work, so in case they should have train us more than that so that we can understand it more. Because that one week, it puts a lot of pressure on us to understand. If they extend the days it will help us, it will be great." CHW, Male, 24 years old

4. Discussion

Task-shifting has been known to decrease the burden on higher level healthcare providers in rural populations where resources are scarce. By introducing the CHW program into their health system, Ghana Health Services has begun to tackle issues of healthcare resources and health coverage amongst its most vulnerable populations. This study worked in the context of Ghana's national CHW program to explore how women and CHWs themselves perceived the program to support the use of family planning in the Amansie West district of Ghana. Although the quantitative did not show evidence that CHW contact was associated with family planning uptake, the in-depth interviews were able to describe the perceived role of CHWs and emphasize the value they play in supporting the uptake and use of family planning. With programmatic challenges of reporting, attrition, training, and other factors, it was clear that the CHW experience was not homogeneous and offered opportunities to improve the reach and impact of the program. Although only 56% of the sample reported that they had ever interacted with a CHW, the program seemed to have an impact on the lives of the community members by providing healthcare knowledge and services to the community.

All of the stakeholders described the CHWs' role as providing a broad healthcare package to households, with family planning included in that package. With limitations on their ability to provide family planning directly in the households, CHWs were limited in their role to be a bridge between the community and government health services.

Several participants expressed that they would prefer contraceptive services to be provided at the household and believe that it would have impacted their use of family planning. Studies have now demonstrated that CHWs can effectively deliver injectables in the home environment, which can lead to increased uptake and improved method choice[13]. Implementing these higher-level services via CHWs in Ghana may be possible with additional training and monitoring.

The data highlights the value of the inter-personal relationships that CHWs are able to develop with their clients. The accessibility of having CHWs visiting community members at the households contributed to the comfort and confidentiality that fostered trusting interactions around sensitive healthcare topics. By establishing or having established relationships with the community members, CHWs were found to be valuable to the communities that they serve. As CHW programs have been implemented globally, the leverage of the CHWs' pre-existing social networks has shown potential in facilitating health conversations, with social familiarity improving uptake of family planning[3].

Our data suggests that management, monitoring and evaluation of the CHW program is necessary to expand the reach of the program and family planning services. Implementing more monitoring and evaluation will be useful when addressing issues of CHW retention and quantifying contraception uptake associated with the CHW program. Also, including management support may address the variance amongst the CHWs' experiences with training and support, as well as quantity and quality of women

interactions with CHW. Monitoring and evaluation are an essential step in the scale-up and implementation of programs that must not be neglected[23].With monitoring and support, CHWS have been shown to make a difference in addressing healthcare issues to vulnerable populations in South Africa[24], Zambia[5], Tanzania[12], Kenya[13], and Ghana[25].

The Ghana CHW program has expanded healthcare access to rural populations and has been able to meet the healthcare needs of rural populations. Although this study did not reveal a significant association between CHW contact and family planning uptake, it does provide an understanding of how CHWs are perceived by women and by the CHW workforce itself. Through in-depth interviews, participants emphasized the impact of CHWs on improving health outcomes through knowledge sharing. Similarly, other programs have been able to increase uptake of family planning[26,14], improve HIV/AIDS outcomes[27], address other physical health concerns[28,29,30], and address mental health[31]. Although there is not much literature on other community health extension workers programs that look at the role and value of CHWs to understand the effectiveness of this cadre on promoting family planning usage, this study provides understanding on the perceptions of women and CHWs regarding the CHW program.

4.1 Implications for Further Research

Research is needed throughout the entirety of implementation of CHW programs. This continuous evaluation can assist in developing targets, monitoring the impact through the perceptions of the women, and documenting overall outcomes.

Research can also better quantify CHW associated uptake of family planning and investigate the overall healthcare knowledge shared to the community through the CHW program. A study that tracks CHW activity, retention, and identifies the barriers to their work will be monumental to the literature of task-shifting amongst low-level health works, such as CHWs. In the future, an impact evaluation research is needed to examine whether CHW programs achieve their intended goals.

It will also be useful to include male household members in future studies that address barriers to family planning. This study did not report the barriers to family planning uptake; however, literature has suggested that male partners contribute to unmet need for family planning[32,33]. Identifying more specifically male knowledge and perceptions of family planning, and how CHWs can address these barriers, may help solve some of the root causes of low uptake of family planning.

4.2 Study Strengths and Limitations

This study's use of a mixed methods approach was one of the key strengths, as it provided complementary data and therefore a broader perspective on the CHW program. Combined, the quantitative and qualitative findings described the characteristics and perceptions of the CHW program in addressing the community's family planning needs. The findings, however, must be interpreted in the light of the study's limitations.

For data collection, additional training and feedback sessions for all qualitative research assistants would have helped to obtain consistent data across participants. The

use of only English-speaking researchers for the CHW interviews could have limited nuances in descriptions of phenomena and led to socially desirable responses. Having the two male translators present during some of those interviews may have also introduced bias. Another issue with uniformity was not translating all IDI guides into Twi. Although it allowed the research assistants freedom in explanation, it could have led to different explanations across the interviews.

Lastly, the connection of this study to the Ghana Health Service's CHW program may have introduced social desirability bias due to fear of losing the services. Although there is not a lot of evidence that this limited the results, descriptions provided could suggest overly positive or restricted responses.

5. Conclusion

Health system strengthening has been a major concern for decades and will continue to be a concern with population shifts, lack of educational opportunity and lack of access to quality healthcare. Through the provision of family planning discussions in their healthcare services, CHWs were able to increase knowledge and provide referrals to higher-level health services. Relying on the accessibility of CHWs to increase knowledge was described by participants to empower communities' access to healthcare services. However, for further progress to be made, the program must address issues of retention, consider shifts in service provision, and improve monitoring practices to provide better support for CHWs in promoting the uptake of family planning. CHWs and other health extension workers are an innovative approach to addressing the health needs of underserved populations. By establishing CHWs as a strong work force, countries will be able to tackle the disparities presented in rural communities.

Appendix A

Millennium Promise Ghana-Duke University Global Health Institute Community Health Worker Research Partnership

Survey

Participant ID: _ _ _
Date: _____
(dd/mm/yy)

Subdistrict:
Antoakrom
Mwanso Nkwanta
Keniago
Essouwin
Tontokrom
Agroyesum

Research Assistant ID:
1
2
3
4
5
6

W'anya akwanya no ka yei kyere deɛ wone no ɛrekasa no

Thank you for agreeing to take this brief survey. I am going to ask you some questions about yourself, your desire to have children, your use of contraceptives, and your community health worker. The survey should take about 60 minutes. There are no right answers to these questions. Be sure to pick the answer that is best for you personally. We are in a private place where no one will hear your answers, and I will keep them private. You may skip questions, take a break or stop at any time if you would like to do so please let me know. If you do not understand a question, please tell me. It is important for you to answer questions truthfully. Do you have any questions or concerns before we begin?

Meda wo ase sɛ w'ate aseɛ sɛ w'agye npɛnsɛpɛnsɛmu kakra yi atum. Mere be bisa wo nsɛm kakra afa wo ho wɔ ɔpɛ a wo wɔ sɛ wobɛwo. Deɛ ɛfa nnuro a ɛb) wohoban ɛfri nyinsɛn ho; ɛnni kwan sɛ npɛnsɛpɛnsɛmu yi boro sima aduosia mpo. Anoyie a wode bɛma no nnim sɛ w'ati anaa sɛ w'atwa. Hwɛ nso sɛ anoyie a wode bɛma me no yɛ nea ɛbɛɛboa w'ankasa. Bia a

yɛwɔ yi yɛ baabi a obi nni ka yɛ ho, eyi nti obiara nte w'anoyie a wode bɛma nsɛmbisa no. Mɛ hwɛ nso sɛ ɛbɛkoso ayɛ asumasɛm na obiaa nte da. Wo betumi abɔ nsɛmmisa no bi atra. Wo bɛtumi ahome so anaa, wopɛ sɛ kwan mu baabi wo gyae a wowɔ akwanya sɛ woka kyerɛ me. W'onte asɛmbisa bi ase a wo wɔ ho kwan sɛ wo bisa me. Ɛho hia paa sɛ w'ano yie wɔ nsɛmmisa no ho bɛyɛ deɛ ɛyɛ nokware nko ara. Ansa na, yɛbɛhyɛ aseɛ no merebisa sɛ biribi kyere w'oadwene anaa wo wɔ asɛmbisa bi ma me?

A. Demographics

DEM1	How old are you? W'adi nfeɛ sɛn?	
DEM2	Have you ever attended school? W'akɔ sukuu pɛn?	0) No **[Skip to DEM3]** Daabi 1) Yes Aane
DEM2a	What is the highest level of school you attended? Mpenpɛnsoɔ bɛn na woduru wɔ sukuu krɔmu?	1) Primary 2) Middle/JSS/JHS 3) Secondary/SSS/SHS 4) Higher Anaa
DEM3	What is your occupation? Adwuma bɛn wo yɛ?	1) Farmer Okuani 2) Teacher Ɔkyerɛkyerɛni 3) Trader Odwadini 4) Food vendor Aduanetɔni 5) House wife Ɔyere a ɔnyɛ adwuma 6) Health worker Apoden Dwumayɛnii 7) None Menyɛ adwuma 8) Other

		Biribifoforɔ
DEM3_other	What is your occupation? Adwuma bɛn wo yɛ?	
DEM4	Are you in any relationship with a man? Wo tebea wɔ marimasɛm nu te sɛn?	1) Married Me yɛ ɔwarefoɔ 2) Living with a partner but not married Me ne ɔhokani na ɛte nso ɛnyɛ awareɛ 3) In a relationship but not living together Me wɔ ɔhokani nanso ɛnyɛ me ne no na ɛte 4) Single/Not in a relationship Me wɔ ɔhokani nanso ɛnyɛ me ne no na ɛte **[Skip to DEM3b]**
DEM4a	How long have you been in this relationship? **[In years; if less than 1 year, use decimal. Ex. 0.25]** Enfie anaa mmerɛ dodoɔ sɛn na wo ne saa ɔhokanni yi atena?	_____ Years
DEM4b	How long has it been since your last relationship with a man? ɛnmmere bɛn na ɛtwa tuɔ a w'one ɔhokani bi nyaa nnamu nkuta ho?	Less than 2 Years.....1**[Skip to DEM4]** ɛnnuru afe Over Two Years.....2 ɛboro afe Never..... .3 Anaa koraa

DEM4c	Have you been sexually active in the past 2 years? Wo ne barima anya nnamu nketaho nfie mmienu a atwam no?	0) No Aane 1) Yes Aane
DEM5	What is your religion? Nyamesom kuo bɛn na wo wɔ mu?	1) Catholic 2) Anglican 3) Methodist 4) Presbyterian 5) Pentecostal 6) Charismatic 7) Seventh Day Adventist 8) Jehovah's Witness 9) Other Christian Anaa foforo bi 10) Islam Kramosom 11) Traditional/Spiritualist Abosomsom 12) No religion Me nni nyamesomkuo biara mu 13) Other **[Display DEM4_other]** Anaa sɛn na ɛteɛ
DEM5_other	What is your religion? Nyamesom kuo bɛn na wo wɔ mu?	
DEM6	In the past month, how often did people in your household not eat because you all could not afford food? Bosome a ɛtwaa mu yi mpɛn dodoɔ sɛn na ɛbaa sɛ sika nni hɔ	Did not happen .....0 Ebi ansi da Once or twice.....1 Baako anaa mprenu so More than once or twice but

	nti wo ne w'abusua anya aduane anni?	not every day.....2 Ɛbro baako anaa mprenu so nso na ɛnyɛ dabiara Every day.....3 Da biara
DEM7	Does your household have the following?: Wo fie wɔ nneɛma a edidisoɔ yi? **[Cash crops would include: Cashew, Cocoa, Coffee, etc. that are sold for profit]**	Yes No Electricity.....1 0 Anyinam kanea Piped Water.....1 0 Paapo nsuo Private indoor toilet.....1 0 Ankorɔ ankorɔ agyanan bia a ɔwɔ efie mu Private outdoor toilet....1 0 Anaa Ankorɔ ankorɔ agyanan bia a ɔwɔ abɔnten Farmland.....1 0 Afusaase Cash Crop Farm.....1 0 Afuo tesɛ Cashew, kookoo, kɔfe, ɛne deɛ etesaa House.....1 0 Efie Vehicles.....1 0 Kaa (lɔɔre)
DEM8	Does any member of this household have a bank account? Abusua a wo ne wɔn te yi mu bi wɔ bank akanto anaa?	0) No **[Skip to DEM 7b]** Daabi 1) Yes Aane

DEM8a	Do you have a bank account in your own name? Wowɔ bank akanto a ɛwɔ wo anka din mu?	0) No Daabi 1) Yes Aane
DEM8b	What are other ways that you save money for future use? **[Check all that apply]** Akwanhodoɔ bɛn na wofaso kora wo sika? **[Check all that apply]**	Susu.....1 Mobile money.....2 Trusted person.....3 Obiara megye no di Home.....4 Mekro me sika fie Other.....5 Anaa ɔkwan foforoɔ so **[Display DEM7b_other]** None ɛbi nni hɔ
DEM8b_other	What are other ways that you save money for future use? Kyerɛ akwanhodoɔ wofaso kora wosika?	
DEM9	Do you personally own a cell phone? Wo wɔ mobile-fɔn a ɛyɛ wo ankasa agyapadeɛ?	0) No Daabi 1) Yes Aane
DEM10	**[Record observation]** House made of:	Cement or Brick.....1 Natural Products.....2

B. Pregnancy History and Status

PRG1	How many children do you have? (i.e. children you gave birth to and are still alive) Mma dodoɔ sɛn na wowɔ; Merepɛ akyerɛ sɛ, mma dodoɔ	Girls_____ Maayewa Boys_____ Mmamuaa

	a w'ankasa w'awo a ɔte ase saa brɛyi.	
PRG 2	Other than these children, how many other times have you been pregnant? **[If 0 skip to PRG3]** Sɛ yɛyi wo mma yeinom fri mu a, mpɛn dodoɔ sɛn wo anyisɛn? **[If 0 skip to PRG3]**	
PRG2a	What was the outcome of those pregnancies? Nnsonsuansoɔ bɛn na ɛbaa nyinsɛn yeinom ho?	Number of Current pregnancies _____ Mprenpren yi menyim Spontaneous miscarriages _____ Nyinsen no seɛ mpofrim so Induced abortions _____ Me yii nyinsɛn no tuguu yɛ Still births _____ Me woo akodaa no na w'awu deda Child that died in infancy, childhood or adulthood ____ Ebi wɔ hɔ a abofra no wu ansa na w'di bosome, anaa abɔfra no pɛgya kakra anaa onynini ansa na wa wu Total _____ Wɔn dodoɔ yɛ sɛn
PRG 3	Are you currently pregnant? Wonyem saa brɛ yi anaa?	0) No **[Skip to PRG4]** Daabi 1) Yes Aane 2) Unsure/Maybe **[Skip to PRG4]** Wonnim/Anaa wontumi nkyerɛ Seisei
PRG3a	Approximately how many	First trimester (1-3

	months pregnant are you? Wo susu sɛ wonyisɛn yi adi abosome ahe?	months).....1 Bosome baako de kosi abosome mmienu Second trimester (4-6 months) .....2 Abosome nnan de kosi abosome nsia Third trimester (More than 6 months) ...3 Abosome nsia ne deɛ ɛkyɛnsaa
PRG 3b	Have you had an antenatal visit? Wode wo nyinsen yi akɔ ayaresebea?	0) No Daabi 1) Yes Aane
PRG 4	Sometimes a woman becomes pregnant when she does not want to be. Have you ever become pregnant when you did not want to be? Ɛduru brɛ bi a ɔbaa tumi nyinsɛn na ɔmpɛ. W'anyinsɛn mmerɛ a wompɛ pɛn?	0) No Daabi 1) Yes Aane
PRG 5	Have you been sexually active within the past 3 months? Ɛbɛyɛ abosome mmiensa ni, w'adi mpamu nkitahoo bi (anaa wone obi adi mpa mu agorɔ)?	0) No Daabi 1) Yes Aane **[Skip to PRG6]**
PRG 5a	If not, have you been sexually active in the past two years? Sɛ ɛnte saa dea, mere bisa wo bio; ɛbɛyɛ nfeɛ mmienu ni, wone obi adi mpamu agorɔ bi?	0) No Daabi 1) Yes Aane
PRG6	Have you ever had a hysterectomy? (i.e. Had your uterus removed) W'atwa awoɔ? (Mekyerɛsɛ w'ayi	**0)** No **[Skip to PIA1]** Daabi 1) Yes Aane

	wo awodeɛ?)	
PRG6a	Has this happened in the past 2 years? Eyi sii bɛyɛ mfie nmienu a atwam no anaa?	0) No Daabi 1) Yes Aane

C. Pregnancy Intentions and Attitudes

PIA1	Do you wish to have any more children? Ɛyɛ wopɛ sɛ wobɛwo bio anaa?	0) No **[Skip to PIA2]** Daabi 1) Yes Aane
PIA1a	How many more children do you wish to have? Mma dodoɔ sɛn na wopɛsɛ wo wo?	
PIA1b	Do you have a preference for the gender of these future children? Mma a wopɛsɛ wo wo daakyeno, wohwɛ anim kwan sɛ ebia wopɛ ɔbaa anaa ɔbarima?	0) No Daabi 1) Yes Aane
PIA1c	How many boys? Mmarima sɛn?	
PIA1d	How many girls? Mmaa sɛn?	
PIA2	Does your partner wish to have any more children? Ɛyɛ wo hokanii no pɛ sɛ ɔbɛwo	0) No **[Skip to PIA3]** Daabi 1) Yes Aane

	nma no bi aka ho?	2) Don't know **[Skip to PIA3]** Me nnim
PIA2a	How many more children does your partner wish to have? Mma dodoɔ sɛn na wo hokanii nyae a anka ɔbɛwo akaho?	
PIA2b	Does your partner have a preference for the gender of these future children? Mma a wo hokani pɛsɛ ɔwo daakyeno, ɔhwɛ anim kwan sɛ ebia ɔpɛ ɔbaa anaa ɔbarima?	0) No Daabi 1) Yes Aane 2) Don't Know Me nnim
PIA2c	How many boys? Mmarima sɛn?	
PIA2d	How many girls? Mmaa sɛn?	
PIA3	Do you want to become pregnant in the next few months? Wowɔ adwene anaa nyehyɛe bi sɛ abosome kakraa a edi yɛn anim no wobɛ nyinsɛn?	1) No Daabi 2) Yes Aane 3) N/A – Already pregnant Me nyem deda
PIA4	Do you think your partner would be happy if you became pregnant in the next few months? Wo gyedi sɛ wohokanii anibɛgye sɛ wo bɛ nyinsɛn wɔ abosomee kakra a edi yɛn anim yimu?	Very unhappy.....0 N'ani ngye koraa Mostly unhappy.....1 N'ani ngye koraa da Mostly happy.....2 N'ani bɛgye abroso Very happy.....3 N'ani bɛgye papa

		Don't know Me nnim
Tell me whether you agree or disagree with the following statements. **Kyere w'adwene wɔ nsɛm a edidisoɔ yi ho kyere me sɛ; wogyetum anaa wongye ntum.** [*If currently pregnant, ask these questions for how she feels about her pregnancy.*]		
PIA5	If you got pregnant now, it would be embarrassing for you Sɛ wo nyinsɛn saa brɛ yi mu a ɛbɛyɛ aniwuo ama wo	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
PIA6	If you got pregnant now, it would be embarrassing for your family Sɛ wo nyinsɛn saa brɛ yi mu a ɛbɛyɛ w'abusua aniwuo	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
PIA7	If you got pregnant now, it would be stressful because you are not sure you would be able to support the baby Sɛ wonyisɛn saabrɛ yi mu a, ɛbɛyɛ kodaana ne ateetɛɛ ama wo ɛsansɛ wonni anidasoɔ sɛ wobɛ tumi ahwɛ abofra no	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
PIA8	If you got pregnant now, your partner may leave you. Sɛ wo nyinsɛn seisei ara a wo hokanii bɛtumi agyae wo awareɛ?	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

PIA9	Getting pregnant at this time is one of the worst things that could happen to you. Nyinsɛn wɔ saa brɛ yi no, ɛbɛyɛ asɛm kɛseɛ paa ato wo?	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

D. Contraception

Now we would like to talk to you about family planning and the various ways or methods that a woman can use to delay or avoid pregnancy.

Saa brɛ yi, yɛ pɛ yɛ ne wo kasa fa awoɔ nyehyeɛ ne akwan anaa adwene ahoroɔ a, ɔbaa bɛfaso de atwentwɛn anaa asi nyinsɛn ho kwan.

	Contraceptive	**1. Have you heard of?** W'ate... ..... ho asɛm	**2. Is this available in your community?** Yei nom bi wɔ wo kro a wote mu yi?	**3. Have you ever used this method?** Wode eyi bi abɔ woho ban pɛn?	**4. Have you used this method in the past 2 years?** Nnfie mienu ni wode eyi bi abɔ wo ho ban?	**5. Are you currently using this method?** Saa brɛ yi wo gu so de saa nhyen hyeɛ yi bi bɔ wo ho ban?	**6. Does /Did your partner know about your contraceptive use?** So wo hokan i nim awoɔ ho nyehyeɛ wode bɔ woho ban?
INJ	Injects abl es	0) No Daabi **[End]** 1) Yes Aane	0) No Daabi 1) Yes Aane	0) No Daabi	0) No Daabi **[End]** 1) Yes Aane	0) No Daabi	0) No Daabi

	Mpani ɛ ɔde bɔ nyi nsɛn ho ban		2) Don't Know Me nnim	**[End]** 1) Yes Aane		1) Yes Aane	1) Yes Aane
	INJ 5a	Which type of injectable do you or did you use? Mpaniɛ no mu deɛ ɛwɔhe na wode bɔɔ wo ban anaa wo gu so de bɔ woho ban?			1) Depo Provera (3 month) **[Skip to INJ8]** 2) Norigynon (1 month) **[Skip to INJ8]** 3) Both 4) Don't know **[Skip to INJ8]**		
	INJ 5b	If both, which injectable are you currently using? Sɛ wode mpaniɛ no nmienu abɔ wo ho ban pɛn a, ɛneɛ na ɛmu deɛ ɛwɔhe na gu so de bɔ ban saa brɛ yi.			1) Depo Provera (3 month) 2) Norigynon (1 month) 3) Don't know		
	INJ 5c	How long ago was your last injection? Paniɛ ɛtwatoɔ no wo wɔɔ no brɛ bɛn?			_____ Weeks _____ Months		
IMP	Implants Nhoma a, ɔde hyɛ we deɛ mu bɔ nyi nsɛn	0) No Daabi **[End]** 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Mennim	0) No Daabi **[End]** 1) Yes Aane	0) No Daabi **[End]** 1) Yes Aane	0) No Daabi 1) Yes Aane	0) No Daabi 1) Yes Aane

	ho ban						
	IM P5a	What type of implant do you use? Deɛ ɔdehyɛ honam mu no deɛ ɛwohe?			1)Jadelle (5year – mfie num) 2)Implanon (3year – mfie miɛnsa)		
	IM P5 b	How long have you had this implant? Mfie dodoɔ sɛn na saa nhoma yi ahyɛ wo wedeɛ mu?			_____Months _____Years		
IUD	Intr aut eri ne De vice Ho ma a, ɔde hye aw ode ɛ mu bɔ nyi nsɛ n ho ban	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Da abi [E nd] 1) Ye s Aa ne	0) No Daabi [End] 1) Yes Aane	0) No Daab i 1) Yes Aane	0) No Daab i 1) Yes Aane
	IU D5 a	How long have you had this IUD? Nna dodoɔ sɛn na wode adeɛ yi ahyɛ wa wodeɛ mu?			_____Months _____Years		
PIL	Pill /Ta blet s	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know	0) No Da abi [E nd]	0) No Daabi [End] 1) Yes Aane	0) No Daab i 1) Yes	0) No Daab i

	Pris a bɔ nyi nsɛ n ho ban		Menni m	1) Ye s Aa ne		Aane	1) Yes Aane
	PI L5a	How many pills have you taken in the last 7 days? Ɛbɛyɛ na nson ni, pris dodoɔ sɛn na w'afa?			(0-7) _____Pills		
CON	Co nd om Kot e-Sok oso	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Da abi [E nd] 1) Ye s Aa ne	0) No Daabi [End] 1) Yes Aane	0) No Daab i 1) Yes Aane	
	CO N5 a	In the last three months, how often did you use condoms? Bosome miɛnsa a atwam no, mpɛn dodoɔ sɛn na wode condom (kote-sokoso) abɔ woho ban?			Never.....0 Ɛnsii da Rarely .....1 Ɛntaa nsi Sometimes....2 Mmrɛ bi wɔhɔ a Almost every time .....3 ɛtaasi mpɛn pii Every time.....4 Abrɛ biara		
EMC	Em erg enc y Co ntr ace ptiv e	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Da abi [E nd] 1) Ye s Aa ne	0) No Daabi [End] 1) Yes Aane	0) No Daab i 1) Yes Aane	0) No Daab i 1) Yes Aane

	Gyaso-gyasoban bɔ						
	EMC5a	When was the last time you used emergency contraception? Abrɛ bɛn ne deɛ ɛtwa toɔ wode aduro a ɛyɛ adwuma gyaso-gyaso sii nyisɛn ho kwan?			------Days [Nna bi] ----Weeks[Naawɔtwe] ------Months [Bosome mu] ------Years [Mfeɛ mu]		
FES	Female Sterilization Maawɔtwa	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Daabi [End] 1) Yes Aane			0) No Daabi 1) Yes Aane
	FES3a	How long ago? Ɛbɛyɛ mmrɛ dodoɔ sɛn ni?			____Months ____Years		
MAS	Male Sterilization Marimaawɔtwa	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Daabi [End] 1) Yes Aane			
	MAS5a	How long ago? Ɛbɛyɛ mmrɛ dodoɔ sɛn ni?			_____Months [Bosome mu] _____Years [Mfeɛ mu]		

CAL	Calendar Method Nnabuo	0) No Daabi [End] 1) Yes Aane		0) No Daabi [End] 1) Yes Aane	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane	0) No Daabi 1) Yes Aane
WID	Withdrawal Twe frimu	0) No Daabi [End] 1) Yes Aane		0) No Daabi [End] 1) Yes Aane	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane	
HER	Herbal/Traditional Methods Ahabanana abibiduro	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane 2) Don't Know Menni m	0) No Daabi [End] 1) Yes Aane	0) No Daabi [End] 1) Yes Aane	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane
	HER5a	Which herbal/traditional method do you use? Ahaban anaa abibiduro bɛn na wode bɔ nyinsɛn ho ban?					

LAM	Lactational Amenorrhea Method (LAM) Nufu mabanbɔ	0) No Daabi [End and go to CTR1] 1) Yes Aane		0) No Daabi 1) Yes Aane	0) No Daabi 1) Yes Aane	0) No Daabi [End] 1) Yes Aane	0) No Daabi 1) Yes Aane

[Only if currently using LAM method]

LAM 5a	Are you exclusively breastfeeding? Ɛyɛ nufoɔ nkoaa na wo de rema anaa?	0) No Daabi 1) Yes Aane
LAM 5b	Has your period returned? W'oasane abu wo nsa?	0) No Daabi 1) Yes Aane
LAM 5c	How old is your baby? Woba no adi sɛn?	1) 0-6 months 2) Older than 6 months

CTR1	In addition to the methods that I asked you about, is there anything else that you have done to prevent pregnancy? Sɛ wode nyinsɛn banbɔ nyehyeɛ a m'abisa wo nyinaa to nkyɛn a, wowɔ nyinsɛn	

	banbɔ nhyehyeɛ foforoɔ bi a w'oayɛ pɛn?	
CTR2	**[Display if *5* is 1 for any]** Who influenced you to use your current birth control method? **[Check all that apply]** Hwan na ɛhyɛɛ wo nkoran a wode saa awoɔ nhyehyeɛ yi na ɛbɔ wo ho ban? **[Check all that apply]**	No one.....1 Nyɛ obiara Partner.....2 Mehokanii Family.....3 Mebusuanii Friend.....4 M'adamfo Community Members.....5 kroba bi Community Health Worker....6 Apomden Dwumayɛnii a ɔwɔ me mpatɛm hɔ Doctor.....7 Ɛyɛ dokotani Religious Leader.....8 ɔsofo/Me som mu dinkanfoɔ Other_____ **[Display CTR2_other]** Obifoforɔ
CTR2_ other	Who influenced you to use your current birth control method? Hwan na ɛhyɛɛ wo nkoran a wode saa awoɔ nhyehyeɛ yi na ɛbɔ wo ho ban?	
CTR3	**[Display if *5* is 1 for any]** What is the main reason you chose your current birth control method? **[Ask this question without answer**	Convenience.....1 Ɛyɛmrɛ (nyɛdɛn) Availability.....

	choices, probe when necessary] Ɛdeɛn na wo gyinaa so de yɛɛ nyinsɛn banbɔ a wo reyɛ no saa brɛ yi? **[Ask this question without answer choices, probe when necessary]**	.....2 Ɛho nyɛden (wo benya brɛ biara) Cost..... .....3 Ne boɔ nti STI/STD protection..... .....4 Ɛbɔ nna mu yareɛ ban Partner's preference..... 5 Ɛno na me hokani pɛ Recommended by a friend/family...6 Adamfoɔ/abusuani bi na ɛkyerɛɛ me Past experiences....7 Ɛgyina me suahunu so Few/no side effects....8 Ɛho nni nsɛm (Ɛho dwo) Length of coverage...9 Ɛbɔban kyɛ Privacy....10 Wotumi yɛ no kokoam Other_____11 **[Display CTR3_other]** Foforɔ bi
CTR3_ other	What is the main reason you chose your current birth control method? Ɛdeɛn na wo gyinaa so de yɛɛ gyinsɛn banbɔ wo reyɛ no saa brɛ yi?	
CTR4	**[Display if *5* is 1 for any]** Where did you get your current birth control method? **[If using pill, injectable, or condom, check all that apply within the past year]** Ɛhefahe na wonyaa awoɔ mu enhyehyeɛ a wode rebɔ woho ban saa brɛ yi? **[If using pill, injectable, or condom, check all that apply within the past year]**	Drug stores.....1 CHPS/Health post.....2 Health center.....3 Hospital.....4 Herbal medicine seller.....5 Community health officer (in community)....6

		Community health worker (in community)...7 FP (PPAG or Marie Stopes) Clinic.....8 Friend/Relative..... .....9 Family planning campaign..... ...10 Other.....11**[Display CTR4_other]** Foforɔ bi Not applicable....12
CTR4_ other	Where did you get your current birth control method? Ɛhefa na wonyaa awoɔ mu enhyehyeɛ a wode rebɔ woho ban saa brɛ yi?	
CTR5	**[Display if *5* is 1 for any]** Did your CHW have an influence on your choice of birth control? Nhyehyɛe a wode rebɔ wo nyisɛn ho ban no, Apomden Dwumayɛ Nii a ɔwɔ wo mpatɛm ha no na ɛnam no so anaa?	0) No Daabi 1) Yes Aane
CTR5a	**[Only display if CTR*5* is 1]** Describe how your CHW had an influence on your choice of birth control method Kyerɛmu; kwan a w'Apomden Dwumayɛ Nii no faaso boaayɛ maa wotumi yii nyisɛn banbɔ hyehyeɛ a wode reyɛ adwuma saa brɛ yi.	
CTR6	**[Skip if *5* is 1 for INJ, IMP, IUD, PIL, FES, MAS]]** What is the main reason you are not currently using any modern birth control method?	

	Ɛdeɛn nkyerɛmuu bɛn na wode bɛma sɛ; wonnyɛ nhyehyɛe biara a wode bɔ nyisen ho ban?	
CTR7	**[Display if *5* is 0 for INJ, IMP, IUD, PIL]** Why have you stopped using a birth control method in the past two years? Adɛn na mfie nmienu ni w'agyae nhyehyɛe a wode bɔ wo ho ban firi nyinsɛn ho?	
CTR7a	**[Display if *5* is 0 INJ, IMP, IUD, PIL]** Did you discuss stopping your contraceptive use with your CHW? Woregyae nhyehyɛe a wode bɔ nyinsen no ho ban no, wo bɔɔ Apomden Dwumayɛnii a ɔwɔ wo mpatɛm hɔ amaneɛ?	0) No Daabi 1) Yes Aane
CTR8	**[Display if 4 is 1 INJ, IMP, IUD, PIL, CON, EMC, FES, MAS, HER]** Did you experience any complications/ side effects with your birth control method? Wofaa ɔhaw bi mu nnmrɛ a na wode awoɔ ho nyehyɛe nuro rebɔ w'awoɔ ho ban?	0) No **[Skip to CTR9]** Daabi 1) Yes Aane
CTR8a	Which method did you experience complications/side effects with? **[If more than one, please select the one with the most]** Family Planning hyehyeɛ no mu deɛ ɛwɔ na ama wo ɔhaw anaa nsusuae bone bi pɛn? **[If more than one, please select the one with the most]**	Depo Pravera (3 month injectable) Norigynon (1 month injectable) Jadelle (5 year implant) Implanon (3 year implant) IUD Pill Condoms Emergency

		contraceptives Female sterilization Male sterilization Herbal/traditional methods
CTR8b	Describe complications/side effects? Kyerɛ sɛdeɛ ɔhaw anaa nsusuae bone no teɛ	
CTR8c	Did you discuss these complications/side effects with your CHW? Wokaa haw a wofaa mu yi kyerɛɛ Apomden Dwumayɛnii a ɔwɔ wo mpatɛm hɔ?	0) No Daabi 1) Yes Aane **[Skip to CTR8e]**
CTR8d	Reasons for not discussing complications/side effects with your CHW? Ɛbaa no sɛn na wofaa haw mu na w'ammɔ Apomden Dwumayɛnii no amaneɛ?	
CTR8e	Did you discuss these complications/side effects with a healthcare provider in a facility? Anyɛbiaa wone apomden dwumayɛnii bi dii saa ɔhaw anaa nsusuae bone yi ho nkomɔ?	0) No **[Skip to CTR9]** Daabi 1) Yes Aane
CTR8f	Do you feel the healthcare provider was knowledgeable? Wode w'ani to fam a; wo gyetum sɛ na Aponden Dwumayɛnii no wɔ nimdeɛ?	0) No Daabi 1) Yes Aane
CTR9	Is there a birth control method that you would like to use but you are not currently using?	0) No **[Skip to CTR10]** Daabi

	Nyinsɛn ho banbɔ anna family planning nuro bi wo hɔ anka wopɛ sɛ wo de bɔ woho ban na nso sɛsei yi womfa nyɛ adwuma?	1) Yes Aane
CTR9a	What birth control method would you prefer to be using? Nyinsɛn ho banbɔ anna family planning nuro bɛn na anka wopɛ paa sɛ wo de bɛbɔ woho ban?	Depo Pravera (3 months) Norigynon (1 month) Jadelle (5 years) Implanon (3 years) IUD Pill Condoms Female sterilization Male sterilization Other **[Display CTR9a_other]**
CTR9a _other	What birth control method would you prefer to be using? Nyinsɛn ho banbɔ anna family planning nuro bɛn na anka wopɛ paa sɛ wo de bɛbɔ woho ban?	
CTR9b	What is the main reason you are not using your preferred birth control method? **[Ask this question without answer choices, probe when necessary]** Ɛdeɛn paa ne nkyeremu a wobɛ tumi de ama sɛ nyinsɛn ho banbɔ a wopɛ paa no womfa nyɛ adwuma seisei? **[Ask this question without answer choices, probe when necessary]**	Cost Neboɔ nti Availibility Sɛ ebi wohɔ anaa ebi nni hɔ Ability to access Ɛkwan wobɛ faso anya Knowledge Sɛ wonya ɛho nsɛm Side effects Ɛho nsunsuansoɔ nti Fear of infertility Sɛ ɛbɛtwa wo awoɔ nti Personal beliefs M'anksa gyedie nti Religious norms Ɛsom a mewɔ mu nti Partner Me hokani nti Attitude of health care provider

		Apomden Dwumayɛnii neyeɛ nti Confidentiality of health care provider Awerɛhyemu wo apomden dwumayɛnii nti Other_____ Biribi fofrɔ **[Display CTR9b_other]**
CTR9b _other	Why are you not using your preferred birth control method? Adɛn nti na wonfa nyinsɛn ho banbɔ nyehyeɛ a wogyetum paa no mmɔ wo ho ban?	
CTR10	Have you experienced any of the following barriers to using modern birth control methods? **[Modern birth control methods do NOT include calender method, withdrawal, herbal/traditional methods, or LAM]** Wo nyaa ɔhaw a mere bɛbobɔ soɔ yi wɔ brɛ a wode woho hyɛɛ awoɔ ho banbɔ nyehyeɛ no mu? **[Modern birth control methods do NOT include calender method, withdrawal, herbal/traditional methods, or LAM]**	No (Daabi) Yes (Aane) Cost Neboɔ nti Availibility Sɛ ebi wɔ hɔ anaa ebi nni hɔ Ability to access Ɛkwan wobɛ faso anya bie Knowledge Sɛ wonya ɛho nsɛm Side effects Ɛho nsunsuansoɔ nti Fear of infertility Sɛ ɛbɛtwa wo awoɔ nti Personal beliefs M'ankasa gyedie nti Religious norms Ɛsom a mewɔ mu nti Partner Me hokani nti Attitude of health care provider Apomden Dwumayɛnii neyeɛ nti Confidentiality of health care provider Awerɛhyemu wo

		apomden dwumayɛnii nti Other_____ Biribi fofrɔ
CTR10 _other	Have you experienced any of the following barriers to using modern birth control methods? **[Modern birth control methods do NOT include calender method, withdrawal, herbal/traditional methods, or LAM]** Wo nyaa ɔhaw a mere bɛbobɔ soɔ yi wɔ brɛ a wode woho hyɛɛ awoɔ ho banbɔ nyehyeɛ no mu? **[Modern birth control methods do NOT include calender method, withdrawal, herbal/traditional methods, or LAM]**	

E. Perception of Partner's Attitudes towards Family Planning

For the following questions, think about your current or most recent partner.

Wɔ nsɛm misa yeinom ho no twe adwene si wo hokanii a wone no wɔhɔ seisei anaa deɛ wone no tenaa a, enkyɛreɛ no.

PAT1	**[Skip if DEM3c if 0]** Have you and your partner ever discussed using a method to delay or avoid pregnancy? Nhyehyɛe a yɛde twe nyinsɛn kɔ akyiri anaa yɛde bɔ yɛn ho ban firi nyinsɛn ho no, wo ne wohokani adi ho nkɔmɔ pɛn?	0) No Daabi 1) Yes Aane
PAT2	**[Skip if DEM3c if 0]** How do you think your partner feels about using a birth control method?	Very against use.....0 ɔmpɛ koraa Mostly against use.....1 mpɛn pii no ɔngye ntum Mostly accepting of use.....2

	Ɛdeɛn adwene na wo susu sɛ wo hokanii wɔ fa nhyehyɛe a yɛde bɔ yɛn ho ban firi nyinsɛn ho?	mpɛn pii no ɔgye tum Very accepting of use.....3 Ɔpɛ na ɔgyetum paa
PAT3	**[Skip if DEM3c if 0]** Is your partner's consent important to you when making family planning decisions? Ɛho nhia sɛ wo hokanii bɛgye atomu wɔ wo nsusuiɛ a ɛfa w'anamon tuo wɔ nyinsɛn ne awoɔ nhyehyɛe ho?	Unimportant.....0 Ɛho nhia Somewhat Unimportant.....1 Ɛho nyɛda nhia Somewhat Important.....2 Ɛho hia kakra Very Important.....3 Ɛhia paa
PAT4	**[Display if *5* is 1 for INJ, IMP, IUD, PIL, CON, EMC]** **[Skip if DEM3c if 0]** Does your partner agree with you using family planning? Wohokani gye tum sɛ wobɛyɛ nhyehyɛe a ɛfa nyinsɛn ne awoɔ ho? (Mekyere Family Planning)	Does not know about use.....0 Onnim saa nyehyeɛ no Does not agree.....1 Ɔngye ntum (Ɔmpene so) Agrees.....2 Ɔgye tum Strongly agrees.....3 Ɔgye tum paa
PAT5	**[Skip if DEM3c if 0]** Have you discussed family planning with anyone besides your partner? Nhyehyɛe a yɛde tete awoɔ mu no, wohokani da nkyɛn a wone obi foforɔ adi ho nkɔmɔ pɛn?	0) No Daabi 1) Yes Aane **[Display PAT5a]**

PAT5a	**[Skip if DEM3c if 0]** Who have you discussed family planning with besides your partner? **[Check all that apply]** Nhyehyɛe a yɛde tete awoɔ mu no, wohokani da nkyɛn a hwan bio na wone no adi ho nkɔmɔ? **[Check all that apply]**	No (Daabi) Yes (Aane) 1)Friend Adamfoɔ 2)Family member Busuanii? 3)Community Health Worker Apomden dwumayeni a ɔwɔ wo mpatɛm 4)Other **[Display PAT5a_other]** ɛyɛ obi foforɔ
PAT5a_other	Who have you discussed family planning with besides your partner? Nhyehyɛe a yɛde tete awoɔ mu no, wohokani da nkyɛn a hwan bio na wone no adi ho nkɔmɔ?	

PAT6	Is your family's consent important to you when making family planning decisions? Sɛ woresi gyinae wɔ nhyehyɛe a ɛfa wo ho banbɔ afri nyinsɛn ne awoɔ mu a; sɛn na w'abusuafoɔ ba mu anaa wɔn ho ehia wɔ w'agyina sie no mu?	Unimportant.....0 Ɛho nhia Somewhat Unimportant.....1 Ɛho nhyɛ da nhia Somewhat Important.....2 Ɛhia kakra Very Important.....3 Ɛhia paa
PAT6a	What family member plays the most important role? Abusua no mu hwan na ne ho hia paa wɔ wo gyinasie mu?	
PAT7	How do you think your religion feels about you using a birth control method? Wo susu sɛ adwene bɛn na wo som a wo wom no wɔ fa awoɔ ne nyinsɛn nhyehyeɛ a w'ayɛ no ho?	Very against use.....0 Wɔn tia mu paa Mostly against use.....1 Mpɛn pii na wɔn tia mu Mostly accepting of use....2 Wɔn gye tum mpɛn pii Very accepting of use.....3 Wɔn gyetum paa
PAT8	How important is religion when making your	Unimportant.....0 Ɛho nhia Somewhat Unimportant.....1 Ɛho nhyɛ da nhia

	decision about family planning? Ɛhia bɛn na wo som ho hia wɔ w'agyinatuo a ɛfa nyinsɛn ne awoɔ hyehyeɛ (family planning) ho?	Somewhat Important.....2 Ɛhia kakra Very Important.....3 Ɛhia paa

F. The Patient Health Questionnaire

For the following items, please listen closely and tell me how often you have been bothered by any of these problems over the past 2 weeks.

Tie nsɛm yeinom yie na kakyere me kwan a nsɛ sei ahaw nawɔtwe mmienu a atwam no.

PHQ1	Little interest or pleasure in doing things Sɛ wo reyɛ biribi a, anigyeɛ anaa ahokeka kakra bi na wo wɔ wɔ adeɛ woreyɛ no mu?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ2	Feeling down, depressed or hopeless Ɛyɛ a na w'ahokeka wɔ fam, biribi hyɛ wo so ma woboto anaa w'anidasoɔ sa?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ3	Trouble falling asleep, staying awake, or sleeping too much Wobrɛ ansana w'atumi ada, wontumi nna koraa anaa woda dodo?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara

PHQ4	Feeling tired or having little energy Wote ɔbrɛ paa anaa wote nka sɛ w'ahoɔden sua?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ5	Poor Appetite or overeating Ɛyɛ a na w'oanum to a wontumi nnidi anaa wodidi ma ɛboro so paa?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ6	Feeling bad about yourself- or that you're a failure or have let yourself or your family down Ɛyɛ a na w'adwene bu wo fɔ, anaa wo dwene sɛ w'adi nkoguo abrabɔ mu anaa ɛhaw wo sɛ w'adi w'abusua anaa wo ho hwamɔ?	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ7	Trouble concentrating on things, such as routine household tasks Woredi dwumabi te sɛ woreyɛ fie adwuma a; wo teetee na w'adwene tumi fri adwuma wo reyɛ no so.	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara
PHQ8	Moving or speaking so slowly that other people could have noticed. Or, the opposite – being so fidgety or restless that you have been moving around a lot more than usual Wo nanteɛ ne wokasa tumi yɛ nyaa; mpo obi tumi hunu; anaa ɛnte saa? Wotumi haahae ara na	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara

	ɛma ɛdane wo kasa ne nanteɛ basabasa	
PHQ9	Thoughts that I would be better off dead or of hurting myself in some way Nsɛm bi tumi ba wɔtri mu sɛ w'awu a anka ɛyɛ anaa sɛ pira wo ho mpo	Not at all.....0 ɛnte saa koraa Several days .....1 Saa na ɛteɛ mpɛn bebree More than half the days.....2 Nna dodoɔ mufa Nearly every day.....3 ɛrekame ayɛ damu biara

G. Autonomy

For the following questions, think about your current or most recent partner.

Wɔ saa nsɛmmisa yeinom ho no, fa w'dwene si hokanii a wo ne no te seisei anaa deɛ wo ne no twaam nkyereɛ no so.

ATN1	[Skip if DEM3c if 0] I can visit families and friends without seeking permission. Mɛtumi akɔsra abusua ne nnamfoɔ a mensrɛ kwan	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
ATN2	[Skip if DEM3c if 0] I can decide how to spend money without permission. Mɛtumi asi agyinaeɛ wɔ kwan a mede me sika fa so wobrɛ mensrɛ kwan	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
ATN3	[Skip if DEM3c if 0] I make decisions about purchases for daily needs. Me ara na mesi gyinaeɛ wo nneama a metɔ no dabiara	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum

		Strongly Agree.....3 Megye tum paa
ATN4	[Skip if DEM3c if 0] I can refuse sex with my partner. Mɛtumi aka akyerɛ me hokanni sɛ mene no nna (anasɛ ɔnfa ne ho nka me)	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
ATN5	[Skip if DEM3c if 0] I can seek care at a health facility without my partner's permission. Mɛtumi akɔ apɔmuden asoɛ biara akɔgye apɔmuden a ɛho nhia sɛ mɛsrɛ kwan afri me hokanii hɔ	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

H. Partner Communication

COM1	[Skip if DEM3c if 0] My partner would support me if I wanted to use a method to prevent pregnancy. Mepɛ sɛ meyɛ nhyehyɛɛɛ bɔ me ho ban fri nyinsɛn ho a mehokanni bɛtaa m'akyi	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
COM2	[Skip if DEM3c if 0] It is easy to talk about sex with my partner. Ɛnyɛ den koraa sɛ mene mehokanii bɛbɔ nkɔmɔ afa nnamu nsɛm ho	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly

		Agree.....3 Megye tum paa
COM3	[Skip if DEM3c if 0] If I didn't want to have sex I could tell my partner. Sɛ mempɛ sɛ me mehokanii di mpamu agorɔ a, mɛtumi aka akyerɛ no pi	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
COM4	[Skip if DEM3c if 0] If I was worried about being pregnant or not being pregnant I could talk to my partner about it. Sɛ ɛba sɛ mesro sɛ mɛ nyim anaasɛ ɛhame sɛ nyinsɛn ntumi nma a, mɛtumi ne mehokani akaho asɛm	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
COM5	[Skip if DEM3c if 0] If I really did not want to become pregnant I could get my partner to agree with me. Ɛkɔba sɛ mempɛ sɛ mɛnyem a mɛtumi ne mehokani akasa ama n'apene so	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

I. Freedom from Coercion

FRE1	[Skip if DEM3c if 0] My partner has stopped me from using a method to prevent pregnancy when I wanted to use one.	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

	Me hokanii asi me kwan wɔ abrɛ a na mepɛsɛ meyɛ nyhehyeɛ a ɛbɛbo me hoban afiri nyinsen ho	
FRE2	**[Skip if DEM3c if 0]** My partner has messed with or made it difficult to use a method to prevent pregnancy when I wanted to use one. Mepɛɛ sɛ meyɛ nhyehyɛe a ɛbɛbɔ me hoban afiri nyinsɛn mu no, mehokanii ampeneso enti saa anamontuo no yɛɛ den maa me	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
FRE3	**[Skip if DEM3c if 0]** My partner has made me use a method to prevent pregnancy when I did not want to use one. Mehokanni ahyɛ me ama m'ayɛ nhyhyɛe bi sɛ menfa mmɔ nyinɛn hoban wɔ brɛ a na me mpene so	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
FRE4	**[Skip if DEM3c if 0]** If I wanted to use a method to prevent pregnancy my partner would stop me. Sɛ mepɛ sɛ me yɛ nhyhyeɛ sɛ mede bɛbɔ nyinsɛn hoban a, me kunu bɛsi ho kwan	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
FRE5	**[Skip if DEM3c if 0]** My partner has pressured me to become pregnant. Me hokanii ahyɛ me ketee ama m'anyem	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

J. Partner Support

Now I want to specifically ask you about the level of support you received from your current or past partner. For each question please think of this person.

[Afei nsɛm me bisa wo seisei yi fa moa a wonya fri wo hokanii a, wone no te seisei yi anaa deɛ wone twaam nkyereɛ no]

NSQ1	[Skip if DEM3c if 0] This person makes you feel liked or loved. Wo hokanii no, ma wo te nka sɛ ɔpɛ w'asɛm anaa ɔdɔ wo	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
NSQ2	[Skip if DEM3c if 0] This person makes you feel respected or admired. Ohokanii yi ma wohunu sɛ ɔbu wo na afei n'ani gye woho san hoahoa wo	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
NSQ3	[Skip if DEM3c if 0] You confide in this person. Wo wɔ awerɛhyɛmu wɔ saa nipa no mu	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
NSQ4	[Skip if DEM3c if 0] This person agrees with or supports your actions or thoughts. Saa nipa yi ne wo yɛ adwene na ɔfoa wo nwumadie ne wo nsusui so	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
NSQ5	[Skip if DEM3c if 0] If you were confined to bed for several weeks, this person would help you. Biribi nti akɔba sɛ ɛwɔ sɛ woda mpa mu, naawɔtwe ne deɛ ɛbrosaa, nnipa yi wɔ ɔpɛ sɛ ɔbɛboa wo	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa
NSQ6	[Skip if DEM3c if 0] If you needed help taking care of the children, this person would help you.	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum

	Ɛkɔba sɛ wohia mmoa wɔ wo nma hwɛ mu, nnipa yi wɔ ɔpɛ sɛ ɔbɛboa wo	Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

K. Relationship with Community Health Worker

CHW1	Do you know a CHW in your area? Wo nim Apɔmuden Dwumayɛnii bi a ɔhwɛ wo mpɔtɛm ha?	1. No Daabi 2. Yes Aane 3. Dont know Me nnim
CHW2	In the last 6 months, how often has a CHW visited your home? Abosome nsia a atwam no, mpɛn dodoɔ sɛn na Apɔmuden Dwumayɛnii bi baa wo fie ha nsra hwɛ?	Never.....0 Ansi da One time.....1 Mpɛn baako Two times.....2 Mprɛ nu Three times.....3 Mprɛ nsa Four times.....4 Mprɛ nan Five times.....5 Mprɛ num Six times (monthly)...6 Mprɛ nsia More than six times.....7 Ɛbro mprɛ nsia
CHW3	How much time does the CHW normally spend with you each visit? Mmerɛ dodoɔ sɛn na Apɔmuden Dwumayɛnii a ɔhwɛ pɔtɛm ha di wɔ wo fie sɛ ɔba nsrahyɛ a?	10-15 minutes.....1 Sima du kosi dumun ntɛm 15-30 minutes.....2 Sima dunum ko si aduasa 30 minutes -1 hour.....3 Sima aduasa kosi ɔdnhwere bako More than 1 hour.....4 ɛboro dɔnhwere baako
CHW4	Approximately how old is the CHW?	18-22 years old.....1

	Wohwɛ a, Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no adi mfie sɛn?	mfeɛ dunwɔtwe kosi aduonum mmienu 23-26 years old.....2 mfeɛ aduonu mmiɛsa kosi mfeɛ aduonu nsia 27-30 years old.....3 mfeɛ aduonu nson kosi aduasa 31-35 years old.....4 mfeɛ aduasa baako kosi aduasa num
CHW5	What is the gender of the CHW? Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no, yɛ ɔbaa anaa barima?	Female.....0 Obaa Male.....1 Barima
CHW6	Has the CHW ever discussed family planning with you? Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm ha no, ne w'adi nyinsɛn ne awoɔ hyehyeɛ (family planning) ho nkomo da?	0)No **[Skip to CHW8]** Daabi 1) Yes Aane
CHW7	**[Skip if DEM3c if 0]** Has the CHW ever discussed family planning with your partner? Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm ha no, ne wo hokani adi nyinsɛn ne awoɔ hyehyeɛ (family planning) ho nkomo da?	0)No Daabi 1) Yes Aane 2)Don't know Me nnim

CHW8	In the last six months, how often has the CHW discussed family planning with you? Abosome nsia a atwam no, awoɔ mu nhyehyeɛ papa no, mekyerɛ family planning; mpɛn dodoɔ sɛn na Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm ha no ne wo adi ho nkɔmɔ?	Never.....0 Ensii da Once.....1 Mpɛn baako 2 times.....2 Mpɛn mmienu 3 or more times.....3 Mpɛn mmiɛnsa ne deɛ ɛbro saa
Now I want to ask you specific questions about your relationship with your CHW. Please tell me if you agree or disagree with the following statements. **Afei mepɛ sɛ me bisa wo nsɛm a ɛfa ayonkofa a ɛda wo ne Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm ha no ntɛm**		
CHW9	The CHW in my neighbourhood knows me well Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no nim me paa	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye tum Strongly Agree.....3 Megye tum paa
CHW10	I look forward to seeing the CHW. Merehwɛ kwan sɛ Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no bɛ ba	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye tum Strongly Agree.....3 Megye tum paa
CHW11	I trust the CHW to provide good information	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum

	Me wɔ Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no mu gyidie sɛ nsɛm biara a mehia no ɔka no yie	Agree.....2 Megye tum Strongly Agree.....3 Megye tum paa
CHW12	I trust the CHW to keep our conversations confidential Megye Apɔmuden Dwumayɛnii a ɔhwɛ mpatɛm ha no di sɛ ɔnfa yɛn nkɔmɔ ɔnkɔ abonten na ɔbɛfa no asumasɛm	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye tum Strongly Agree.....3 Megye tum paa
CHW13	The CHW is knowledgeable about family planning. Ɛba nysɛn ne awoɔ nhyehyɛɛɛ (family planning) ho a, Apɔmuden Dwumayɛnii a ɔhwɛ me mpatɛm no wɔ nimdeɛ paa	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye tum Strongly Agree.....3 Megye tum paa
CHW14	I feel comfortable discussing family planning with the CHW. Me wɔ ahotosoɔ sɛ mene Apɔmuden Dwumayɛnii a ɔhwɛ me mpatɛm no bɛ twetwe nkɔmɔ afa awoɔ nhyehyɛɛɛ pa (family planning) ho.	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye tum **[Skip to CHW14a]** Strongly Agree.....3 Megye tum paa **[Skip to CHW14a]**

CHW14a	Tell us what makes you feel comfortable about discussing family planning with the community health worker Kakyerɛ me; ɛdeɛn na ɛmma wo nya ahotɔsoɔ sɛ wo ne wo Apɔmuden Dwumayɛnii bɛ twetwe nkɔmɔ afa nyinsɛn ne awoɔ nhyehyɛeɛ pa (family planning) ho?	
CHW14b	What makes you feel uncomfortable about discussing family planning with the CHW? **[Ask this question without answer choices, probe when necessary]** Ɛdeɛn na ɛyɛ ɔhaw anaa ɛmma wo nya ahotɔsoɔ sɛ, wone Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm no bɛdi nyisɛn ne awoɔ nhyehyɛe pa (family Planning) ho nkɔmɔ? **[Ask this question without answer choices, probe when necessary]**	Their Age.....1 Ne mfie a wadi Gender.....2 sɛ ɔyɛ ɔbaa anaa barima Personality.....3 Sɛdeɛ ɔteɛ no nti Knowledge level.....4 Sɛdeɛ ne nimdeɛ teɛ nti Similar Friends.....5 Nnamfoɔ te sɛ me Knowing their family.....6 Sɛ menim n'abusua nti Past friendship/relationship.....7 Sɛ wayɛ me yɔnko pɛn nti Other_____99 Biribi foforɔ **[Display CHW14b_other]**

CHW14b_other	What makes you feel uncomfortable about discussing family planning with the community health worker? Ɛdeɛn na ɛyɛ ɔhaw anaa ɛmma wo nya ahotɔsoɔ sɛ, wone Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm no bɛdi nyisɛn ne awoɔ nhyehyɛe pa (family Planning) ho nkɔmɔ?	
CHW15	Do you have a relationship with the CHW outside of the CHW and client relationship? Sɛ yɛyi sɛ Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm no yɛ w'apomuden boafoɔ a, ayɔnkofa foforɔ bi da mo ntɛm?	1) No **[Skip to CHW16]** Daabi 2) Yes Aane?
CHW15a	What kind of relationship do you have with the CHW? Ayɔnkofa bɛn ɛna ɛda wo ne Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm no ntɛm?	Friends.....1 Yɛyɛ nnamfoɔ Family Friends.....2 Yɛyɛ nnamfoɔ a ɛtesɛ nua Classmates.....3 Yɛkɔɔ sukuu baako Neighbors.....4 Yɛte mantɛm baako Family.....5 Yɛyɛ Abusua Other_____99 **[Display CHW15a_other]** Biribi foforɔ

CHW15a_other	What kind of relationship do you have with the CHW? Ayɔnkofa bɛn ɛna ɛda wo ne Apɔmuden Dwumayɛnii a ɔhwɛ wo mpatɛm no ntɛm?	
CHW16	In the last 6 months, were you visited by a CHW? Abosome nsia a abɛsene kɔ no, Apɔmuden Dwumayɛnii bi baa wo nsrahwɛ?	0) No **[Skip to CHW17]** Daabi 1) Yes Aane
CHW17	Do you believe that CHWs are helpful in meeting the health needs of your family? Wo wɔ gyedie sɛ Apɔmuden Adwumayɛfoɔ a wɔ mpɔtɛm ha no bɛ tumi aboa ama wo ne w'busua nsa aka apɔmuden a mo hia?	Strongly Disagree.....0 Mengye ntum koraa Disagree.....1 Mengye ntum Agree.....2 Megye Tum Strongly Agree.....3 Megye tum paa

Appendix B

In-depth interview Female Participants

Read Aloud: Hello, my name is _____. I am a research assistant partnering with Millennium Promise Ghana and Duke Global Health Institute. The purpose of today's conversation is to have a conversation with you about family planning, and the role of community health workers in helping women to get access to family planning, if they desire it. Participation in this study is entirely voluntary and you are free to leave the study at any time, this will not affect any present or future relationships you may have with the Ghana Health Systems nor the National Community Health Worker program. I encourage you to speak openly and honestly about your experiences. I understand that the questions may be personal, you may skip questions, take breaks or stop the interview at any time. This conversation should take about 60 minutes. Do you have any questions before we begin?

1. INTRODUCTION

First, I would like to start by learning more about you. Please walk me through a typical day in your life.

Probes:

- *Married or single*
- *Size of family*
- *Who is living in the household (parent-in-law, extended family)*
- *Employed*

Tell me about any relationship that you are currently in

Probes:

- *Relationship status*
- *Length*

2. PRESPECTIVES ON FAMILY PLANNING

Now I would like to talk about the community you live in. What are some activities women in the community do together?

Probes:

- *Friendships*
- *Supportive of each other*
- *Cook*
- *Religious gatherings*

Do women in the community talk to each other about family planning?

If yes: What do they share with each other?

Probes:

- *Talk about experiences*
- *Side effects*
- *What to use or not to use*
- *Partners opinions or beliefs*

***If no**: Why don't women in the community talk about family planning with each other?*

Probes:

- *Inappropriate*
- *Private family matter*
- *Partners would not approve of it*
- *Stigma*

Who do women in the community go to for advice on family planning?

Probes:

- *Family members*
- *Religious leader*
- *Leaders in community*
- *CHWs*

In your community, what are acceptable methods to prevent pregnancies?

Probes:

- *Specific contraceptive methods*
  - *Do acceptable methods depend on a women's age? Or relationship status? Religion?*

Now that I have a better understanding of what your community is like, I would like to talk more about you.

What are your thoughts on family planning?

Probes:

- *Who should be able to use it/who is it appropriate for?*
- *What methods are appropriate?*
- *Whose decision is it to use family planning?*
- *Whose decision is it for what methods are used?*

Would you describe yourself as being religious or following practices of a certain faith?

If yes: Please describe your religion or faith

If yes: Please tell me how your religion views family planning

Do these religious views influence your decisions about family planning?

3. BARRIERS TO FAMILY PLANNING

Have you ever used a family planning method?

If yes:
Tell me about your use of family planning over your lifetime.
Probes:
- *Different methods at different times*

What led you to use family planning? (for each method mentioned)
Probes:
- *What was going on in your life?*
- *Accessibility? Cost?*
- *Positives and negatives of method*
- *STI protection considered*

How did your partner feel about your use of family planning?

Are you currently using a method?
If yes:
What method are you currently using?

Why did you choose this method?
Probes:
- *Positives and negatives of method*
- *STI protection as a factor?*

How did you come to use this method?
Probes:
- *Influence of friends, family, partner?*
- *Accessibility? Cost?*

If not currently using:
Why are you no longer using a family planning method?

Was there ever a time in your life when you did not want to get pregnant but were not using any method of family planning? Can you tell me about that time and any reasons you did not use family planning?

Probes:

- *Reasons for nonuse*
- *Stock out*

Thinking about women in your community, what are some things that make it difficult to use contraceptives?

What about you – what difficulties have you faced using contraceptives?

4. RELATIONSHIP WITH CHW

Now I would like to take some time to learn more about your relationship with your community health worker.

Please describe the relationship that you have with the CHW

Possible probes:

- *How long have you known them?*
- *How well do you know them?*

Did you have a relationship with them before they became the CHW?

[If they had a prior relationship with CHW] How does the relationship that you had before impact your relationship now?

Possible probes:

- *How and for how long have you known them?*
- *Are you more comfortable? Why or why not?*
- *Do you feel that it positively or negatively affects the programs benefits?*

How often have you been able to interact with the community health worker?

Possible probes:

- *Frequency of visits*
  - *Monthly, Every other month, Rarely*
- *Talk over the phone or SMS*
- *Call them when necessary*

5. EXPERIENCES WITH CHW

I would like to hear more about your experiences with your community health worker. Please describe what a typical visit is like.

Possible probes:

- *Length of visit*
- *What is discussed*
- *Who picks what is discussed*

In these discussions, do you believe that you are able to ask questions freely and get them answered properly?

Possible probes:

- ***If yes**, please give me an example.*
- ***If no**, please explain why*
    - *Is the CHW knowledgeable?*
    - *Understanding of what CHW is saying*

Do you trust your community health worker to keep the personal health issues you discuss with them private?

Possible probes:

- *Feelings of confidentiality*
- *Comfort discussing personal health issues with them*
- *If uncomfortable: why?*

Let's talk more about your experiences with your CHW. Can you tell me about a positive experience you have had with your CHW?

Possible probes:

- *What made this experience positive?*

Have you had a negative experience with your CHW? Please describe.

Possible probes:

- *Comfortability*
- *Did you have privacy in the home?*

6. DISCUSSIONS WITH CHW ABOUT FAMILY PLANNING

Let's talk more about your discussions about family planning with your CHW, can you tell me about them?

Possible probes:

- *When / how often you've had conversations about family planning*
- *What you've talked about*
- *Discussions about available methods*

Do you and your community health worker discuss the contraceptive methods that might be right for you?

Possible probes:

- Discussions about getting access to methods
- Discussions about other difficulties: cost, convenience, partner preference, side effects, personal beliefs

What is your level of comfort discussing family planning with your CHW?

What is the role of your partner in the conversations that you have with your CHW?

[FOR WOMEN WHO ARE CURRENTLY USING OR HAVE USED ANY FAMILY PLANNING METHOD]

What role did your CHW have in your family planning choices?

Possible probes:

- Helped decide what method
- Described benefits and risks
- Discussed cost and continual use
- Provided a referral to clinic
- Accompanied you to clinic
- Helped discuss it with family members/ partner

How helpful was your CHW when choosing a family planning method?

[If CHW referred them to a clinic]

Can you tell me more about the referral that your CHW gave you and the process?

Have you interacted with CHWs other than your normal CHW?

Possible probes:

- How did this happen?
- What was that like for you?

7. Opinions of CHW Program

What are things you like about the CHW program?

What things do you not like about the CHW program?

What recommendations do you have for community health workers to better support households in their use of family planning?

- What should CHWs do

- How should CHWS talk to families

8. CONCLUSION

How can family planning services be improved in this community?

What else would you like to add for how CHW services can be improved in this community?

Appendix C

Community Health Worker In-depth Interview/Focus Group Discussion Guide

Read Aloud: Hello, my name is _____. I am a student researcher from Duke Global Health Institute partnering with Millennium Promise Ghana on a research study. Thank you for agreeing to participate in this interview with me today. The purpose of our conversation today is to talk to you about your work as a CHW, and in particular your role in helping people to get access to family planning. I encourage you to speak as openly and honestly about your experiences and your opinions. The things you share with me today will not be linked to your name. You may choose to not answer questions or take a break or stop at any time. This conversation should take about 60 minutes. Do you have any questions before we begin?

1. INTRODUCTION

First, I would like to start by learning more about you. Tell me why you decided to become a CHW

Possible probes:

- Motivation to be a CHW
- Things you like about the job
- Future plans

Please walk me through a typical day as a CHW.

Possible probes:

- Time visiting households
- Time at the CHPS zone
- Interaction with the CHO or other CHWs

2. **EXPERIENCE BEING A CHW**

Now I would like to talk more about your experience as a CHW.

How many households do you serve?

- How were you assigned these households?

Generally, how often do you visit with each household?

Possible Probes:

- Frequency of meetings
  - Monthly, More than once a month
- Duration of meetings

- Mode of communication: phone, in-person, etc

What influences your choice to visit with each client?
Possible Probes:
- CHW Program requirements
- Clients request a visit
- Scheduled meetings

Tell me a little about how you approach a household when you visit.
Possible probes:
- Who do you approach first in the household?
- Do you have to seek permission to talk to members other than household head?
- How does having to seek permission impact the visit?

Tell me about a typical visit with a household – what you do and what you talk about.
Possible probes:
- How do you decide what to discuss?
- What do you think makes for a successful visit?
- How do you document the visit?

With your household load, how are you able to build relationships with clients?
Possible Probes:
- Building trust
- Communication style
- Privately or with support

Describe how knowledgeable you feel when your clients ask you questions.
Possible Probes:
- If you're not knowledgeable about something, what do you do?
- Experience referring clients to other CHWs, CHOs, Clinics
- Knowledge/use of telemedicine

3. PERSPECTIVES ON FAMILY PLANNING IN THE COMMUNITY

I want to learn more about family planning use in the community where you work. How do you think people in this community feel about family planning?
Possible probes:
- Stigma related to family planning
- Religious influences

Do women in this community talk about family planning?
Possible probes:

- If so, to whom?

What do you think influences the use of family planning?
Possible probes:

- Attitudes/beliefs about family planning (differences by men/women)
- Couple communication and decision-making about family planning
- Ability to access family planning (cost, availability, access to the clinic)
- Rumors or misconceptions about contraceptives (e.g., impact on fertility)

Are there any groups of women that may find it harder to access family planning (e.g., unmarried women, adolescents, married, certain religions)?

In the community you serve, what are acceptable methods to prevent pregnancies?
Probes:

- Specific contraceptive methods
    - Do acceptable methods depend on a women's age? Or relationship status?
- Most commonly preferred methods
- Other things women do to prevent pregnancy, other than family planning (herbal, abstinence)

4. ROLE OF CHWs IN SUPPORTING FAMILY PLANNING

As a community health worker, please tell me what your role is in providing family planning services.
Possible probes:

- How important is this role in your overall job?
- Referral process
- Providing services (e.g., condoms, counseling, referrals)

What is the role of the CHPS facilities and the CHOs in providing family planning to women?
Possible probes:

- How do you work together with them to support your households?
- How do you communicate?

Would you want to change anything about the role/responsibilities that community health workers have in supporting family planning?
Possible probes:

- Other services you'd like to provide
- Any different organizations you'd like to work with, why?

Tell me about the training you received in family planning.

Possible probes:

- Amount/length of training
- Content of training (did it include communication and dealing with uncomfortable issues, mock discussions)
- Refresher courses or ongoing support
- Specialist you can contact about difficult questions

What would you change about your training on family planning?

Possible probes:

- Length of training
- Depth of training
- How could training better prepare you for real-life situations

5. PERSONAL EXPERIENCES SUPPORTING HOUSEHOLD USE FAMILY PLANNING

Now let's talk about how you approach family planning issues with the households you work with.

Possible probes:

- How do you bring up the issue?
- What do you talk about?
- How often?
- Does it vary by client (women who are married, current users, have an unmet need, have a met need)
- How do you document family planning conversations and use?

Who in the household do you discuss family planning with?

Possible probes:

- Who has decision making power in the household and how does that impact family planning

How does your relationship with the client help or hinder discussing family planning? (Ask for examples)

Possible probes:

- Feelings of trust
- Knowing the client outside of client/CHW relationship
- Differences in age/gender/status

As you work with households on family planning, what are some of the challenges/difficulties you've faced?

Possible probes:

- Felt uncomfortable
- Unreceptive client
- Lack of trust
- Areas where you lack knowledge or skills

I'd like to hear about one of your most challenging experiences supporting a household to use family planning.

Possible probes:

- What made this challenging
- How did you deal with the challenges?

I'd like to hear about one of your most successful experiences supporting a household to use family planning.

Possible probes:

- What helped make this successful
- Have you overcome any challenges?

6. PERCEIVED IMPACT OF CHWs ON FAMILY PLANNING UPTAKE

How do you think your work in the provision of family planning services affects the client?

Possible probes:

- Impact on individuals and households
- Empowering to women

How do you think your work impacts the community?

Possible probes

- Positive changes in community
- Impacts on stigma
- Impacts on the health care system
- Overall community health

How do you think the CHW program plays a role on family planning?

7. **PERSONAL EXPERIENCE**

How has being a CHW impacted your life?

Where do you see yourself going next (e.g., future career in health field)?

What has been the most rewarding experience for you as a CHW?

8. ADDITIONAL OPPORTUNITIES FOR CHWs TO IMPROVE FAMILY PLANNING UPTAKE

If you could change anything about the CHW program, what would it be?

Are there any changes to the way CHWs approach family planning that you think would be beneficial to you or to your clients?

9. CONCLUSION

Is there anything that you would like to add?

We thank you for your participation in this interview. Your participation can prove helpful in informing the success of the CHW program.

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