THE ROLE OF RELIGION AMONG WOMEN IN THE HIV EPIDEMIC IN MALAWI

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ABSTRACT

ADAMSON SINJANI MUULA: **THE ROLE OF RELIGION AMONG WOMEN IN THE HIV EPIDEMIC IN MALAWI**
(Under the direction of James C. Thomas, PhD, MPH)

Background

Human immune-deficiency virus (HIV) infection is a major public health problem, with sub-Saharan African being the hardest of the regions of the world. Malawi's adult HIV prevalence is estimated at about 12%. Despite the fact that religion is central in the social life of Malawians and the potential it holds to explain the HIV epidemic in the country, there are limited published reports on the subject.

Methods

Using two data sources, we assessed the role of religion among women on HIV infection and sexual behaviors. In Aim 1, we assessed if self-reported religious denominational affiliation was associated with HIV infection among Malawian women. In Aim 2 we assessed if religion was associated with acceptability of condom use within marriage. We used logistic regression analysis to assess the role of religion in the HIV epidemic in Malawi.

Results

A total of 415 women (15.9%; 95% confidence interval [CI] were HIV infected. Overall, with Catholics as the referent, religion was not associated with any differences in HIV infections among survey participants among different religious denominations: adjusted odds ratio (AOR) and 95% confidence interval (CI): Muslims, 0.93 (95%, 0.66-1.31; Presbyterians, 0.79 (95% CI, 0.55-1.14; Seventh-Day Adventist and Seventh-Day Baptists, 0.64 (95%, 0.39-1.05); Anglicans, 1.22 (95% CI, 0.58-2.57) and Other Christians, 0.97 (95% CI, 0.73-1.29). With regard to condom acceptability in marriage, Muslims as the referent, we found that Christians were 1.71 (95% CI, 0.89-3.27) times to accept condom use within marriage. However, compared to Catholics, Presbyterians were less likely to accept condom use, AOR=0.53 (95% CI, 0.32-0.88).

Conclusion

Overall, these results suggest that religion in Malawi is not able to distinguish HIV prevalence and sexual behaviors.

To my parents, Adamson and Maria-Charity Muula, my wife Angela and children Gari Sinjani Muula and Sinjani Adamson Muula

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PREFACE

Malawians are a people of religions. Almost everyone belongs to some religious denomination. Although Christians are in the majority, people of other faiths are not prevented from exercising their faiths. People spend a lot of time attending to 'Church-related' or 'Mosque-related' activities. The church is life and life is the church. It is interesting that Malawi's Vision 2020 document, a government development road map which spells out the country's development agenda, in its opening statement states that: "*By the year 2020, Malawi as a God-fearing nation will be secure, democratically mature, environmentally sustainable, self reliant with equal opportunities for and active participation by all, having social services, vibrant cultural and religious values and being a technologically driven middle-income economy."*

Of course religion, in its widest sense may have nothing to do with a God with an uppercase G. But many people in Malawi belong to religions which recognize God, and this is appropriately recognized by the government without any preference to a particular religious group.

I grew up in a church and a family that emphasized virtue, dignity and uprightness, whatever the definition of these terms. In any case, in my religion, people who were religious ought to have been "good people." Good people do not get involved with personal or group behaviors that expose them to human immune-deficiency virus (HIV). As I grew up, I realized that may be, that was my erroneous way of understanding religions. Unfortunately the dominant discussion appears to facilitate creation of an impression that religious people do not engage in behaviors that expose them to HIV infection.

Acquire immune-deficiency virus (AIDS) is an important public health problem in Malawi. Religious denominations have been called up to be “partners” in the prevention and mitigation of the consequences of the epidemic in as so far as they promote (sexual) abstinence, mutual monogamy, treatment, care and support of HIV infected persons. Whether the churches or Mosques are achieving these goals was not really known. In addition, if the churches or Mosques were saying “believers” should not get infected with HIV, who was getting infected then?

My questioning of the role of religion in HIV prevention and acquisition gained ground when I served as my church’s Health Ministries Director. I looked at the losses to death of young adults we were incurring amongst both the laity and clergy. In the church though, the message was the same. When I, at one church meeting suggested that condoms may have a role in the church, the reception I received was rather cold. I posed a question to parents: “Which child would you rather have, an HIV infected child who refuses to use condoms or an HIV negative child who uses condoms?” Many parents had difficulties to go through the calculus. They seemed to think that the choice was an HIV negative child who is sexually naïve and a condom-using child who is HIV negative. But my question was that the world out there was tough and parents may have to choose between HIV or condom use and not between no HIV and condom use.

There were justifiable hesitations when I embarked on this exercise of exploring whether religions were associated with HIV infection in Malawi. I did not intend to examine which was better between religion and no religion. Similarly, I did not intend to examine which religion was better off compared to the rest. I only wanted to assess whether there were any differences in sexual behaviors and HIV infection among the

different religions in the country. If we were to find any differences in sexual behaviors, then we could "knock" on the doors of those religions and ask them how they do it. Religions could possibly benefit by having someone independent of them, who have examined their sexual behaviors, so as to facilitate change wherever needed. I did not intend to express any cynicism towards religion or faith.

If some people will read these pages and interpret our research findings as an endorsement or a chastisement of any religion, then that is unfortunate and I suspect, they will be misled. Although a research effort will fail to do any justice to religions if there is limited understanding on doctrines, I did not set out to examine the doctrinal differences between religions in great detail. That question will require different tools and investment in time that were not at my disposal.

Finally, I see the findings from the current research as a tool. Tools can be used for many things, both bad and good. Like a kitchen knife, it can sustain life, but can also cut short a life. I wish though that our understanding of religions and the role they play in sexual behaviors and within socio-political milieu, helps further stem the spread of HIV in Malawi.

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ABC	**A**bstinence, **B**e faithful and **C**ondom use
ACASI	Audio Computer-Assisted Self-Interview
AFS	age at first sex
AFM	age at first marriage
AHIVI	Acute human immune-deficiency virus infection
AIC	African Independent Churches
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral therapy
CCAP	Church of Central African Presbyterians
CEA	Census Enumeration Area
CI	Confidence interval
COMREC	College of Medicine Research and Ethics Committee
CoC	Church of Christ
CSW	Commercial sex worker
DHS	Demographic and Health Survey
DSTM	dry sexual traditional medicine
ELISA	Enzyme-linked immune-sorbent assay
EMM	Effect measure modifier
FGD	Focus group discussion
FIC	Fogarty International Center
FP	Family planning

FTF	Face to Face
GUD	Genital ulcer disease
HAART	Highly active antiretroviral therapy
HIV	Human immune-deficiency virus
HPV	Human papilloma virus
HR	Hazard Ratio
IDU	Injecting drug use or injecting drug user
IGA	Income generating activities
IPV	Intimate partner violence
IRB	Institutional Review Board
KAP	Knowledge Attitudes and Practices
MDHS	Malawi Demographic and Health Survey
MDICP	Malawi Diffusion and Ideational Change Project
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
MP	Member of Parliament
MPHC	Malawi Population and Housing Census
MSM	Men who have sex with men
NGO	Non-governmental organization
NIH	National Institutes for Health
NICHD	National Institute of Child Health and Development
NPV	Negative Predictive Value
NSO	National Statistical Office

OR	Odds ratio
PI	Principal Investigator
POR	Prevalence Odds Ratio
PMTCT	Prevention of mother to child transmission of HIV
PP	Positive prevention
PPV	Positive Predictive Value
PSI	Premarital sexual intercourse
PSU	Primary sampling unit
PWP	Prevention with positives
QECH	Queen Elizabeth Central Hospital
RCT	Randomized Controlled Trial
SDA	Seventh Day Adventist
SDB	Seventh Day Baptist
SES	Socio-economic status
SG	Surgeon-General
SSA	Sub-Saharan Africa
STD	Sexually transmitted disease
STI	Sexually transmitted infection
SW	Sex work or sex worker
TMCSM	Traditional Methods of Child Spacing in Malawi
US	United States
USISP	Unprotected sexual intercourse in a sero-discordant partnership
UNAIDS	The Joint United States Program on HIV/AIDS

UNC-CH	University of North Carolina at Chapel Hill
VCT	Voluntary Counseling and Testing

CHAPTER 1

INTRODUCTION

Globally, there were 33.2 million people living with the human immune-deficiency virus (HIV) in 2007 (UNAIDS, 2008), at least three-quarters of these lived in sub-Saharan Africa. The annual number of people who died from AIDS (acquired immune-deficiency virus) was estimated at 2.1 million, of which 1.6 million of these deaths occurred in sub-Saharan Africa.

Heterosexual intercourse and mother-to-child transmission are the main modes of HIV transmission in Africa. Not surprisingly therefore, sexual behavioral changes and prevention of mother to child transmission (PMTCT) are at the core of HIV prevention efforts on the continent. Reports from nationwide Demographic and Health Surveys (DHSs) from several countries and the peer-reviewed literature suggest that multiple sexual partnerships, being female, sexual partnerships concurrency, intergenerational sex, the low status of women, unemployment, urban residence and high prevalence of sexually transmitted infections (STIs) facilitate the spread of HIV in Africa (Kleinschimdt et al, 2007; National Statistical Office and ORC Macro Inc, 2005; Pettifor et al, 2004; 2007; UNAIDS, 2008).

As in other Southern African countries, Malawi has a high HIV prevalence; estimated at 11.8 percent in persons 15 to 49 years old (National Statistical Office and ORC Macro Inc, 2005). Prior to 2004, population HIV prevalence estimates were largely extrapolated from data obtained from antenatal HIV surveillance settings (Bello et al,

2006; Crampin et al, 2008; Montana et al, 2008). However, in 2004-5 a national survey, the Malawi Demographic and Health Survey (MDHS) was conducted in which the HIV status of survey participants was estimated. This survey has, for the first time provided relatively robust HIV prevalence estimates for the country and a few selected districts which were oversampled. One important finding observed from this exercise was that the overall national HIV prevalence estimate masked district and regional level variability. The HIV prevalence was estimated at about 5.5 percent in Kasungu district (Central region) but 22.5 and 23.1 percent in Blantyre and Thyolo respectively, in the Southern region of the country.

The "core" HIV prevention strategies that Malawi currently promotes include: a) information dissemination on how to protect oneself and others from acquiring or transmitting HIV via sex; voluntary HIV counseling and testing (VCT); prompt diagnosis and effective treatment of sexually transmitted infections (STIs); the "ABC" (abstinence, be faithful or mutual monogamy and condom use) approach; antiretroviral prophylaxis and HIV treatment infected pregnant women and their neonates (National AIDS Commission, 2003); and treatment of adults and children with AIDS-defining illnesses or very low CD4 counts (Buhendwa et al, 2008; Bwirire et al, 2008; Ellis and Molyneux, 2007; Kabue et al, 2008; Lowrance et al, 2008; Moses et al, 2008; Ngoma et al, 2008; Ntata, 2007). Other measures concern interventions to change the structural environment of the community e.g. reduce stigma and discrimination against HIV infected person, increasing the opportunity for income generating activities (IGAs) for vulnerable women and orphans and ensuring uninterrupted supply of condoms and medical drugs for the

prevention and treatment of sexually transmitted infections (Zachariah et al, 2002; 2002b; 2003).

While the study of biomedical determinants of HIV spread and treatment modalities has been the focus of research in the country (e.g. the role of STIs in facilitating transmission (Dyer et al, 1998); the importance of acute HIV infection (Danta and Dusheiko, 2008); the role of Highly Active Antiretroviral Therapy (HAART); the role sexually transmitted reproductive tract infections in facilitating mother to child HIV transmission (Mwapasa et al, 2006); and lately, the possible role of malaria in HIV infection or HIV in malaria infection (Jaworowski et al, 2009), much less attention has been directed towards how religion and religiosity may be associated with the sexual behaviors, treatment and testing seeking behaviors and overall vulnerability to infection. Yet, religion has the potential to influence individual and partnership sexual behaviors as well as influence HIV interventions which may be selected by communities to reduce HIV infection at the national or local community scale. The acceptance and delivery of HIV interventions may be dependent on the prevailing religious culture within a local community as well as at the national stage. This is because religion has the potential of shaping community perceptions and dialogue on HIV-relevant behaviors.

No single definition of religion is ideal for all purposes. Clark (1958) defined religion as a body of beliefs and behaviors, comprising institutional membership, symbolism as rituals and expressing external aspects of behaviors. Geertz (1973) has defined religion "as a system of symbols which acts to establish a powerful, pervasive and long-lasting moods and motivations in humans by formulating conceptions of a general order of existence and clothing these conceptions with such an aura of factuality

that the moods and motivations seem equally realistic" (Geertz, 1997, p 63). For the purposes of our study, we categorized religion as the self reported denominational affiliation with (organized) religion e.g. Catholic, Muslim, Presbyterian, Seventh Day Adventist, Anglican and others.

Religiosity however, is defined as an individual's adherence to doctrines, beliefs, ritual practices of religions and the extent of organizational involvement within a religion, e.g. church attendance or frequency of prayer (Mattis, 2000). Religiosity can either be extrinsic or intrinsic; extrinsic religiosity involves membership in a group which provides protection, consolation and social status as well as allowing members to participate in religious rituals (Allport, 1966; Allport and Ross, 1967, Maltby and Lewis, 1996). Public prayer, baptisms and church or mosque attendance are some examples of how extrinsic religiosity may manifest. Intrinsic religiosity concerns a deeply personal relationship with one's religion (Kahoe and Meadown, 1981) e.g. private prayer or private observance of ritual e.g. Ramadan or private Sabbath observance (Sievert, 2003).

Although religiosity may in some regards appear to overlap with spirituality, the latter refers to an individual's belief in the sacred and transcendent nature of life, which involves a quest for goodness and the manifestation of these beliefs in a sense of connectedness with others, e.g., humans, spirits, and God (Zinnbauer et al, 1997). It is possible for an individual to be spiritual, i.e. relating to a Higher Being, without belonging to an organized religion.

Religiosity may be negatively correlated with liberal sexual attitudes or behaviors (Bassett, 1999; Bassett, Smith, Newell, & Richards, 1999) such as acceptance of non-marital sex (Cochran & Beeghley, 1999). However, the expression of religiosity may

differ by gender. Unlike men, women tend to rate higher on measures of intrinsic religiosity (Francis & Wilcox*, 1998),* such that there may be a relatively greater effect of religion on the behavior of women compared to men. Studies that fail to pay attention to the differences that may exist on how religion manifests or impact men and women different may therefore mask the discovery of important information.

Previous studies have suggested that in Africa, the prevalence of HIV is much lower amongst Muslims compared to Christians, or HIV is lower in communities with Muslim majorities compared to communities with predominance of Christians (Gray, 2004; Kagee et al, 2005; Velayati et al, 2007). This apparent lower prevalence of HIV infection has been attributed to many factors including male circumcision which is common among Muslims and of lower prevalence among Christians. Differential condom use and overall lower-risk sexual behaviors, such as low extra- and pre-marital sex, consequent to adherence to Islamic tenets may also explain the reported differences (Gray, 2004; Kagee et al, 2005; Velayati et al, 2007).

Although virtually all faiths prohibit pre-marital and extra-marital sex, the emphasis that Islam places on these behaviors, demonstrated by the sanctions that may be meted against those who fail to live up to the standard, may be stricter overall, compared to Christianity (Gray, 2004). In addition, the prohibition of alcohol by Islam, but permissible in some Christian religions is an important difference. Alcohol use has been reported as a risk factor for HIV infection (Bastani et al, 1996; Kongnyuy and Wiysonge, 2007; Mmbanga et al, 2007; Weiser et al, 2006).

The majority of studies on religion and HIV and AIDS have been conducted in developed nations, mostly the United States, and often among minority ethnic or social

groups such as African Americans (Ahrold and Meston, 2008; Beaulaurier et al, 2009; Kemppainen et al, 2008; Tyrell et al, 2009). Reports from Africa suggest religion that religion is associated with disclosure of HIV diagnosis among women (Ndiaye et al, 2009) attitudes towards HIV treatment (Zou et al, 2009) and coping strategies towards HIV infection (Maman et al, 2009). Disclosing one's HIV infection status to marital partners or prospective sexual partners could facilitate condom use among HIV discordant couples (Lurie et al, 2008; Wong et al, 2009).

Malawi, like many other Southern African nations, has a generalized HIV epidemic, which is defined by UNAIDS and the World Health Organization as an epidemic in which the adult prevalence is firmly established in the general population and transmission occurs mostly through heterosexual sex (World Health Organization and UNAIDS, 2000). Another definition of a generalized HIV epidemic is the one in which HIV has spread beyond initial subpopulations engaged in high-risk sexual behaviors, such as sex workers or intravenous drug users (IDUs), to the general population, as evidenced by prevalence rates of five percent or more in urban areas (The World Bank, 1997). Research findings of the role that religion plays in the HIV epidemic in a developed world, often with studies conducted in large metropolitan areas with HIV epidemics among "high risk" groups, or heterosexually transmitted infections among ethnic minority groups, may not be relevant to developing world settings with generalized epidemics and rural majorities. The interactions between religion and other community-level variables such as socio-economic status, poverty, educational level of community members and level of modernization may alter the effect of religion on sexual behaviors and HIV infection.

The Malawi Demographic and Health (MDHS) 2004/5 final report (National Statistical Office and ORC Macro, 2005) states that: "Across religions, HIV prevalence varies by gender. Anglican and Muslim women have the highest infection rate (18 and 17 percent, respectively). For men, those who are Seventh-Day Adventists have the highest rate at 17 percent." (p. 233). While comparing proportions of HIV infected persons among different religious groups provides useful information, these are best considered 'unadjusted' estimates as they do not take into account potential confounding variables such as age, gender, place of residence, marital status, education and tribal origins. The assessment was done without due consideration for confidence intervals. The MDHS 2004-5 final report does not state whether sexual behaviors (condom use, extra-marital sex, premarital sex, concurrent sexual partnerships) differ by religious affiliation.

We believe that the limited interest in the study of how religion has affected HIV risk and sexual behaviors in Malawi is an important omission. A comprehensive understanding of the spread and prevention of HIV is inadequate when significant aspects of the social and personal aspects of people, such as religion, have not been given due consideration. The design of HIV interventions programs are limited by the lack of appreciation of the role religion may play in the country. In addition, we concluded the approach that the final report of the MDHS 2004/5 took in reporting that there were differences in HIV prevalence when no confidence limits were calculated was inadequate. We therefore carried out this study to explore the role of religion and religiosity on HIV infection and HIV-associated sexual behaviors in Malawi.

The literature on the role of religion on sexual behaviors and HIV infection in Malawi is sparse. Trinitapoli and Regnerus (2006) reported that sexual behaviors,

perceived vulnerability to HIV infection and self-reported prevalence of sexually transmitted infections (STIs) were associated with religion among men in rural Malawi. These authors however did not assess the relationship between religion and HIV infections. In addition, their data were from only three districts in rural areas, and so may not be generalizable to the rest of the country.

In order to contribute to the literature on the role of religion on sexual behaviors and HIV infection we conducted this study with the following aims:

SPECIFIC AIMS OF THE STUDY

Specific Aim 1

To estimate the strength of association between self reported religion and HIV infection.

Hypotheses A for Aim 1

Individuals who belong to relatively "conservative" religious denominations (Catholic, Muslims) are less likely to be HIV infected than those from much more liberal denominations such as Presbyterian, Pentecostal and African Independent Churches (AIC).

An opposite but still plausible hypothesis is that individuals from conservative churches will be more likely to be HIV infected than those from the liberal churches. Malawian conservative religions may not accept HIV infection/ AIDS as an important public health problem that also affect their members. The religion may therefore fail to initiate or support effective interventions aimed at preventing HIV acquisition such as condom use. Religious individuals may have high sense of self-efficacy i.e. belief in

oneself that preferred behavior is possible. High level of self-efficacy has been found to be associated with condom use (Adih and Alexander, 1999; Hendricksen et al, 2007) which may impact HIV infection.

Specific Aim 2

To estimate the strength of association between and condom use acceptability within marriage.

Hypotheses for Aim 2

Individuals from different religions will have different likelihoods of having engaged in high risk sexual behaviors (extra-marital, pre-marital sex, casual sex, non-use of condoms at last casual, extra-marital or premarital sex).

In keeping with the basic tenets of most of the religions which advocate for sexual abstinence among the unmarried and promotion of sexual relations only within marriage, religions may differ in acceptability of condoms. There is however potential for social desirability in reporting on sexual behaviors in that highly religious individuals may be more likely to report acceptable behaviors, due to self-censorship compared less religious individuals. Another expectation is that highly some religions may also be poorly equipped to use condoms when they engage in out-of-marriage sexual relations as they may not have prepared in advance for such kind of experiences.

CHAPTER 2

BACKGROUND AND SIGNIFICANCE

Malawi's adult HIV epidemic is heterosexually-driven, as is the case in the rest of sub-Saharan African countries (Schimd et al, 2007; UNAIDS, 2008). Human immune deficiency virus and AIDS are the leading causes of adult morbidity and mortality in the country (Blacker et al, 2004; Jahn et al, 2008; Doctor and Weinreb, 2003; Zaba et al, 2005). The country's high HIV prevalence has resulted in a significant reduction in life expectancy at birth from about 57 years in the pre-AIDS era to the current estimate of about 37 years (Doctor and Weinreb, 2003; Stanecki, 2004). Rural Malawi has experienced a tripling of adult mortality between 1998 and 2000 when compared to data from 1980-1990, most likely as a result of the AIDS epidemic (Doctor and Weinreb, 2003; 2005).

While heterosexual intercourse is the leading mode of HIV transmission, there is some concern that HIV spread via unsafe medical injections could be contributing more to the HIV epidemic in Africa than has previously been acknowledged (Biraro et al, 2007; White et al, 2007; Whitworth et al, 2007). There is also recent data suggesting that same-sex intercourse among men could be contributing to the HIV epidemic in Malawi than had been previously recognized (Baral et al, 2009). Data on men who have sex with men (MSM) in Malawi are limited, just as is the case in most of sub-Saharan Africa. Muula (2007) has reviewed popular media (newspaper) discourse on homosexuality in Malawi; and there is some evidence that MSM is increasingly being recognized by

society. Furthermore, for the first time in the country, Ntata et al (2008) have reported on the socio-demographic characteristics, stigma and discrimination against MSM in Malawi. In general however, the bulk of the literature seems to suggest that HIV transmission through unsafe injections and MSM only make a small contribution to the overall southern African HIV problem (Schmid et al, 2007; UNAIDS, 2008). The importance of these two modes of HIV spread, common in Western nations, will likely continue to attract attention in the future in so far as their contributions to the HIV epidemic in Malawi.

The known biological and social risk factors for heterosexual HIV transmission or acquisition include: concurrency of sexual relationships (relationships overlapping in time); unequal power dynamics within relationships; lack of consistent and correct condom use within an HIV discordant partnership; sexually transmitted infections, especially those associated with genital ulceration; female sex ; a high viral load; acute HIV infection; transactional sex and; absence of male circumcision (Adimora et al, 2007; Cohen, 2004; Doherty et al, 2006; Da Ros and Schmitt, 2008; Pettifor et al, 2007; Powers et al, 2008).

Much of the literature on religion and health concludes that religious people tend to live healthier and longer lives than their non-religious counterparts (Hill et al, 2007; Koenig, 1999; Whooley et al, 2002). Participation in private religious activities is associated with better health outcomes (Helm et al, 2004; Koenig et al, 1998). The health outcomes shown to be associated with religion are in a wide range of domains such as mental health and substance abuse, overall quality of life, positive health behaviors, disease screening, continuity of care, surgical complications, endocrine and immune

function, hypertension, coronary artery obstruction, carotid atherosclerosis, and survival rates after cancer diagnosis (Moreira-Almeida, 2006; Hummer et al, 1999; Lutgendorf et al, 2004; Silvestri eta l, 2003; Sloan et al, 1999; Strawbridge et al, 1997; 2000; Weaver and Koenig, 1997;1999;2006).

In a study of American women, Morse et al (2000) reported that study participant's practice of public religiosity (e.g. church attendance) was found to be inversely associated with engagement in high-risk health behaviors among HIV-infected persons. Private religiosity (e.g. private prayer) however, was unrelated to participants' perceptions of physical health. These authors also reported that religiosity was positively associated with a sense of control over one's health.

Much of the research from Africa examining factors associated with various sexual behaviors or HIV infection has not paid much attention to religion. Specifically, there is limited research examining the role of religion in the HIV epidemic in Malawi. Yet religious values are sources of moral proscriptions for many people such that it (religion) may influence perceptions and sexual behaviors, which ultimately influence vulnerability to infection.

The extent to which religion may influence individual's behaviors may depend on the specific doctrines and beliefs of a particular religious group and the extent to which the individuals are committed to their religion and have integrated denominational teachings (Lehrer, 2004; Odimegwu, 2005). Religion and religiosity could have a bearing on premarital and extramarital sex, condom use, HIV testing and more importantly, whether one is infected or not (Luginaah et al, 2005; Lum et al, 2007; Wringe et al, 2008).

FACTORS ASSOCIATED WITH HIV INFECTION

In the following paragraphs, we will discuss selected socio-demographic and behavioral factors that may be associated religion, but also HIV infection. In doing so, we realize that many other factors, especially biological, will be left out and yet these are also important determinants of HIV infection. Some of these biological factors include: the presence of, and access to treatment for, STIs in influencing vulnerability to infection especially herpes simplex virus (HSV) infection and other genital ulcer causing infections (Berman and Cohen, 2006; Boily et al, 2009; Pilcher et al, 2007); cervical ectopy in adolescent girls and young women and the anatomy of the female genital tract (Myer et al, 2006; Moss et al, 1991; Sarkar et al, 2006); acute HIV infection; and the higher risk of HIV acquisition associated with receptive anal sex compared to vaginal sex (Gorbach et al, 2009; Kapiga et al, 2009; Risser et al, 2009).

HIV infection and condom use

Consistent and correct condom use reduces HIV transmission during penetrative sex (Diltmore, 2006; Weller and Davis, 2002). Condoms are also critical in the prevention of other STIs and diseases such as genital ulcer disease which facilitate HIV spread (London, 2001; Ntumbanzondo et al, 2006). Metcalfe (2007) has reported that in an isolated community in rural Malawi, availability of condoms was associated with reduced incidence of sexually transmitted infections. Use of condoms could be more important during transactional sex or sex with non-regular partners where risk of transmission is higher (Ntumbanzondo et al, 2006; Zachariah et al, 2003).

Hendricksen et (2007) have reported that in South Africa, among young men 15 to 24 years, use of condoms at last sexual intercourse was associated with condom use at sexual debut, or having discussed condom use with sexual partner and self-efficacy. Married men and men in long-term sexual relationships were less likely to have used condoms at last sexual intercourse. In a study of 500 HIV infected men and women in Botswana, Kalichman et al (2007) reported that study participants were less likely to have used condoms at last intercourse if sex occurred within long-term sexual relationships. It would appear that duration of sexual relationship may be an important factor in the decision about whether to use condoms or not, even among persons who know they are HIV infected.

Condom use may not be acceptable in specific relationships and communities. Kaler (2004a) has reported that in rural Malawi, the male condom has been associated with negative connotations emphasizing disease, population control and malevolence. Widespread condom acceptability therefore remains a challenge. Chimbiri has also reported that in rural Malawi, the male condom was perceived as "an intruder in marriage" as use was interpreted as evidence of lack of trust in a relationship where partners' fidelity was expected. Taylor et al (2007) have reported that high school adolescents in South Africa who perceived that use of condoms did not necessarily imply lack of trust in a partner were more likely to have used a condom at last sexual intercourse (Juarez and Martin, 2006). In other studies it has been found that study participants have reported that condom use is difficult in relationship that was perceived as trusting (Manuel, 2005; Prata et al, 2005), In a systematic review of 268 qualitative

studies, Marston and King (2006) identified that young people perceived condom use as stigmatizing.

Condom use promotion is the single most proven HIV prevention intervention that has been especially controversial in Malawi (Rankin et al, 2008). On the one hand is the Ministry of Health and HIV-focused non-governmental organizations (NGOs) promoting or at least not discouraging condom use. On the other hand however are many religious groups which discourage condom promotion and use, arguing that promotion encourages premarital sex among young people and marital infidelity (Kaler, 2004).

The perception that condoms promote high risk sexual practices was also reported by Muula (2006) in a study of Members of Parliament (MPs). In this qualitative study, a participant was quoted as saying: **"***I believe if we conduct a survey, we will discover with shock that instead of discouraging sexual intercourse, these condoms have promoted the rate of sexual intercourse on our land. People are saying, if I have a condom, I can go for these bad habits. By the end of the day, it is being promoted instead of being discouraged"* (Muula, 2006, p.24). The perception that condoms are not a solution but the problem in the fight against HIV, have been reported in other settings (Cort and Modeste, 2006-7; Mbonile and Kayombo, 2008; Pérez-Jiménez et al, 2009). Often, the argument is that condoms promote sexual irresponsibility or "promiscuity" as people who know how to use or have access to condoms will be more likely to engage in premarital or extra-marital sex (Sellers et al, 1994). At the confirmation hearings for Dr Joycelyn Elders as United States' Surgeon-General (SG) in 1993, Senator Dan Coates (Republican, Indiana) expressed concern that "just promoting condoms as a solution to the problem

can promote promiscuity" (United States Senate, 1993). Often however, religions have been at the fore-front of discouraging condom use (Freidman, 1995; Pfeifer, 2004).

The notion that condom promotion and use might make individuals engage in sexual behaviors such as premarital, transactional and extra-marital sex can be conceptualized within the theoretical framework of risk compensation (Brewer et al, 2007). With regard to sexual behaviors and HIV infection, the risk compensation theory suggests that individuals adjust their behavior so that their perceived level of personal risk to infection is in line with a target level of risk they believe to be acceptable. This target level of risk is based on perceived costs and benefits of enacting (or not enacting) a behavior, whereas perceived risk is based on factors such as risk information or personal experience. Individuals attempt to compromise on risk, not reduce it to zero, so if one risk factor is reduced, the individual might feel able to tolerate a higher risk exposure in another behavior. Risk compensation theory would suggest that knowledge that condoms can protect from HIV infection when used during intercourse, individuals might increase risky sexual behavior (e.g. premarital, transactional, concurrent multiple partnerships or extra-marital sex) because of the expected protection that condoms confer.

Some studies have explored risk compensation within the context of vaccines Brewer et al (2007) reported that individuals who had been vaccinated against Lyme disease found decreases in Lyme-preventing personal behaviors (e.g., using tick repellent) in the vaccinated group. In a sample of Ugandan men, 50% reported that they would not use condoms if they were provided with an effective HIV vaccine (Horn et al, 1997). Marlow et al (2007) found that around 12% of British parents thought the human papilloma virus (HPV) vaccine would encourage sex, and 18% thought it would

encourage unsafe sex, although in an Australian study, fewer parents (5%) were concerned that the vaccine would lead to promiscuity (Marshall et al, 2007). Risk compensation beliefs have been associated with lower intention to vaccinate daughters against HPV and other STIs in studies in the United States, the United Kingdom, Finland, China, and Canada (Brabin et al, 2006; Davis et al, 2004; Chan et al, 2007; Marlow et al, 2007; Marlow et al, 2009; Ogilvie et al, 2007; Webb et al, 1999; Zimet et al, 2005). We do not know to what extent the lessons learnt from Lyme disease and the hypothetical responses of Ugandan military men would be appropriate in real life.

A Cochrane Collaboration systematic review by Underhill et al (2008) has evaluated the effects of abstinence-plus programs among adolescents and youths for HIV prevention in high-income countries. Abstinence-plus interventions use a hierarchical approach to promote sexual abstinence and then safer sex for the prevention of HIV. The main message is that sexual abstinence is the best or safest behavior choice and the intervention aims to encourage both primary abstinence (remaining a virgin) and secondary abstinence (returning to abstinence after experiencing sex in the past). Abstinence-plus programs also recognizes that some adolescents and youth may choose to be sexually active and so it (the intervention) also encourages sexually active participants to use condoms, limit their number of sexual partners, or practice other safer-sex behaviors (Underhill, 2008). Abstinence-plus interventions also include extensive information on STIs, pregnancy, contraception, and HIV.

Among the criticism of Abstinence-plus programs is that since it trains youth in safer sex if they choose to be sexually active, contraceptive use and STI knowledge, these programs are encouraging young people to experience sexual debut, have multiple sexual

partner, adolescents and youths will not always use condoms and more frequent sex as they may no longer fear pregnancy or infections. The review by Underhill et al (2008) however showed that many young people who are provided Abstinence-plus program actually limit the number of sexual partners, some may not even initiate sex and safer sex practices are reported to be practiced.

Religions may also fear that their members are more likely to engage in premarital, extra-marital sex and have concurrent partnerships if they have knowledge and believe that condoms are affective. Some religions however, may also teach the importance of condoms or not discourage use among their members.

Religion and transactional sex

The definition of transactional sex continues to change. Initially and almost exclusively then, transactional sex referred to a male having sexual intercourse with a female sex worker, commercial sex workers (CSW) or "prostitute" (Barton et al, 1987; Centers for Disease Control and Prevention, 1987; Mann et al, 1987; Reynaga, 2009; van de Perre et al, 1985; 1987). This perception has changed as the HIV epidemic has progressed. The term "prostitute" has fallen out of favor among researchers and activists, in favor of commercial sex worker and sometimes, sex worker (Seshu, 2003). Furthermore, as comprehensive understanding and sexual behaviors of society change, sex work is currently understood not as an exclusive lifestyle of some women or poor persons but rather of both men and women, poor and not so poor, and transsexuals and transgenders.

Virtually, all religions proscribe being a sex worker or having sexual relations with sex workers (SWs). Many definitions of "transactional sex" exist and sex work occurs under diverse conditions (Kippax, 2008). There are anecdotal assertions by some researchers arguing that almost all sex is 'transactional'; i.e. even spousal relations may occur on the exchange of love, emotional support or economic support. However, our definition of transactional sex would be of sexual relationships where the giving or receipt of money, gifts or services is an important factor and the exchange is between non-spousal partners (Chatterji et al, 2004, Dunkie et al, 2004; Gregson et al, 2002). This 'operational' definition is preferred largely because of its association with high HIV risk.

Sex work is associated with increased risk of HIV infection to both the service provider and the client (Day and Ward, 1997; Dunkle et al, 2004; Ramjee et al, 1998). Recognized sex work however represents, only one aspect of a complex phenomenon of transactional sex. Research in Malawi and other parts of Africa suggests that exchange of sex for material benefits is common practice, and that few women who engage in such transactions identify as sex workers (Hunter, 2002; Luke, 2002; Caldwell et al, 1989; MacPhail and Campbell, 2001; Nzyuko et al, 1997; Poulin, 2007; Wood and Jewkes, 2000).

For some people, the common motivation for transactional sex is basic survival and subsistence needs (Hunter, 2002, Luke, 2002; Wojcicki, 2002). Young women and men whose life opportunities for education and employment are severely compromised may use transactional sex to help achieve higher status in society which prioritize sexual success and material consumption (Hunter, 2002, Nyanzi et al, 2003). Limited data from rural Malawi and other settings in Eastern and Southern Africa seem to suggest that

transactional sex is common in regular youth relationships although it is often not perceived as sex work (Meeker and Calves, 1997; Swidler and Watkins, 2005). Using data from rural Malawi, Poulin (2007) observed that, contrary to usual expectations, in rural Malawi, money and gift transfers in sexual partnerships were part and parcel of the courting practices among young people. Transfers were as much about the expression of love and commitment as they were seen as responsibility for males toward their [female] partners in meeting the financial needs of women. Poulin (2007) further reported that "for girls, receiving money means maintaining dignity and avoiding ridicule." Whenever there is no transfer of gifts from the (male) partner to the girl, this is often perceived as lack of commitment on his part. For both boys and girls, the exchange money for sex was a sign of commitment, love, and positive signs of movement of the relationship toward marriage.

Regardless of the motives and the various forms that transactional sex may take in a non-spousal relationship, there is ample evidence to suggest that sex with exchange of money is a risk factor for HIV (Chatterji et al, 2004, Dunkle et al, 2004; Gregson et al, 2002. In addition, virtually all religions proscribe [transactional] sex with a non-spousal partner. The extent to which any religion's members adhere to messages against transactional sex with a non-spousal partner could potentially influence HIV prevalence within a society.

Education and HIV infection

Research results on the association between HIV infection and education have been equivocal (Crampin et al, 2003; Fylkesnes et al, 2001; Gregson et al, 2991; Kelly et

al, 1999; Kwesigabo et al, 1998; Smith et al, 1999). In a systematic review reported by Hargreaves et al (2008), it was observed that the majority of reviewed studies published prior to 1996 found either no association or the highest risk of HIV infection among the most educated. However, studies conducted since 1996 were more likely to find a lower risk of HIV infection among the most educated. Forston (2008) however, using data from the Demographic and Health Surveys (DHS) for Burkina Faso (2003), Cameroon (2004), Ghana (2003), Kenya (2003), and Tanzania (2003) found that better-educated respondents were more likely to be HIV-positive compared to those with no education. This was the case even when sex (gender), age, urban-rural residence, and region of residence were controlled for.

While high levels of education have been associated with a high likelihood of being infected with HIV (Gabrysch et al, 2008) in some settings, Pettifor et al (2008) however have reported that education or at least schooling was protective against HIV infection among South African youths. In a study of pregnant women attending prenatal care at Malawi's Queen Elizabeth Central Hospital (QECH) in Blantyre, Kwiek et al (2008) did not find any association between education and HIV infection. Women with competed two or four years of secondary education were however less likely to be infected with syphilis compared to women with no education (OR=0.44, 95% CI, 0.22-0.86 and 0.35, 95% CI, 0.17-0.71 respectively). In a prospective study which recruited 18 years or older women attending postnatal or family planning (FP) care in Lilongwe and Blantyre (Malawi) and Harare (Zimbabwe), compared to women with no education, women with 1-4 years of secondary education or Ordinary level or higher education were more likely to be infected, hazard ratio (HR) = 2.60 (95% CI, 1.14-5.92) and 3.25 (95%

CI, 1.39-7.57) respectively. Women with primary education however, had no different incidence of HIV compared to women with no education, HR=1.92, 95% CI, 0.87-4.24 (Kumwenda et al, 2006).

With regard to HIV relevant behaviors, Largarde et al (2001) have reported a positive relationship between condom use and education in extra-marital sex among men in Cameroon and Zambia. Michelo et al (2006) have reported evidence suggesting that high education may be associated low likelihood of being HIV infected. Recently, HIV infection prevalence has been estimated to be decreasing much faster among higher education groups than among low education groups in Zambia (Michelo et al, 2006). These authors reported that in urban areas, young people with ≥ 11 school years were more likely to use condoms during the last casual sex (OR= 2.96; 95% CI, 1.93-4.52) and report less number of casual sexual partners (OR= 0.33; 95% CI, 0.19-0.56) in the last twelve months than lower educated groups. We do not know what association exists between HIV infection and education in Malawi.

Educated people may be more likely to be exposed to prevention information as part of formal schooling or though access to various forms of media. The 'germ theory' of disease (Nagy, 1953; Sigelman et al, 1997), may also be easily understood among the educated compared to people with no or limited education. Educated people may therefore be amenable to appreciate the fact that AIDS is caused by HIV and connect the fact that individual or partnership behaviors are at the core of transmission. In addition, individuals may need to be sufficiently motivated to avoid HIV infection to avoid unprotected sex. Educated people may have more to lose if they acquire infection and therefore may be more motivated to avoid infection.

Another possible aspect of education that may affect HIV vulnerability is the perceived control one has over their own behavior i.e. self-efficacy (Ajzen, 2002). Educated people may have greater self-efficacy compared to non-educated persons and in the context of the HIV epidemic this may mean the ability of using condoms when appropriate. In addition, educated women are less likely to be poor, more likely to earn an income and also more likely to negotiate safer sex, discuss condom use with their partner and feel a sense of control in their sexual relationships (Jewkes et al, 2004). In a study from India, men with lower education were more likely to engage in extramarital sex compared to those with better education (Schensul et al, 2006).

In his study of Malawian women, Doctor (2005) found that Presbyterian, Catholic, and Other Christian women were more likely to have some schooling than Muslim women. Muslims in Malawi are less likely to have benefited from formal education (non-*madrassah*) due to several reasons. Firstly, education is not often valued among the Yao (the majority of whom are Muslim). Secondly, the fact that education has often been provided by Christian churches has given the impression that the purpose of their education is to convert non-Christian into the religion (Jarhall, 2001, Mumisa, 2002).

Wealth and HIV infection

Depending on the geo-socio-cultural setting, wealth has had negative as well as positive association with HIV infection. As a result of access to health information, HIV voluntary counseling and testing (VCT), prompt and effective treatment to STIs, reduced motivation to provide sexual services in exchange for cash or other services, reduced

need to be migrant laborers (Lurie et al, 2003), wealth can be protective against HIV infection.

In a study in Ghana and Kenya, Awusabo-Asare and Annim (2008) reported that wealth was not associated with having multiple sexual partners among both men and women in Ghana and women in Kenya, but was positively associated with high risk sexual among men (in Kenya). Uthman and Kongnyuy (2008) in their analysis of the Nigerian DHS (2003) found that compared to women from richest wealth quintiles, women from middle and poorest household were 51% and 83% more likely to multiple concurrent sex partners in the last 12 month respectively. Adair (2008) reported that wealth was positively associated with HIV infection.

In a population-based cohort study in Zimbabwe, Lopman et al (2007) observed that the largest decreases in HIV prevalence were in the top third of the wealth index distribution (tercile) in both men and women. In men, HIV incidence was significantly lower in the top wealth index tercile (15.4 per 1000 person-years) compared with the lowest tercile (27.4 per 1000 person-years). Although men of higher wealth index reported more sexual partners, they were also more likely to use condoms. Women in higher wealth categories women reported fewer partners and were less likely to engage in transactional sex. Kimuna and Djamba (2005) however, reported no association between wealth status and extramarital sex among Zambian men.

Voluntary counseling and testing (VCT) for HIV is often reported as a crucial public health intervention that is effective in prevent HIV spread. In a meta-analytic study assessing the effectiveness of VCT (Denison et al, 2008), individuals who had VCT were reported to significantly report less likely to engage in unprotected sex when compared to

behaviors before receiving VCT. People who had VCT were less likely to have engaged in unprotected sex compared to participants who had not received VCT (OR 1.69; 95%CI, 1.25-2.31). However, VCT had no significant effect on the number of sex partners (OR 1.22; 95%CI, 0.89-1.67).

In their analysis of the Malawi Multiple Cluster Indicator Survey (MICS) of 2006, Siziya et al (2008) found that compared to the highest wealth quintile, women in all lower quintiles were less likely to report having had HIV testing and have received test results. Some of the women who reported to have had HIV testing may have done so as a part of a diagnostic work up due to clinical symptoms of HIV-related medical conditions. It is also possible that many had sought HIV testing as part of HIV preventive services. If that were the case, and individuals who have received HIV testing are less likely to be exposed to HIV, then access to VCT could influence lower prevalence among people in wealthier categories.

In an environment of widespread poverty and sources of livelihoods may be limited, but some people are prepared to pay for sexual services, poor women and men may engage in sex work. Wealth and its association with education may provide the opportunity for travel away from home where new, and HIV-infected sexual partners may be acquired.

Marriage and HIV infection

In the generalized HIV epidemic in Eastern and Southern Africa, marriage is an independent risk factor for HIV infection. It is often reported that men's extramarital sexual activities put their (female) spouses at risk of infection, although women do also

bring HIV into marriage (Lurie et al, 2003). Smith (2007) has reported that contradictory morality, economic and gender disparity within marriage facilitate men's unfaithfulness within marriage, which puts women at risk of HIV infection.

Age at first sex (AFS) and age at first marriage (AFM) have been reported to be negatively and positively associated with HIV respectively (Marston et al, 2009). Late marriage and a long interval between sexual debut and marriage are positively associated with HIV infection (Bongaarts, 2007). Women are also more likely to suffer intimate partner violence within than outside of marriage. Being a victim of partner violence is associated with heightened vulnerability of HIV infection (Karamagi et al, 2006; Ntaganira et al, 2008). In a South African study, Dunkle et al (2006) reported that men who were perpetrators of IPV reported with higher numbers of past year and lifetime sexual partners, more recent intercourse, and a greater likelihood of reporting casual sex partners, problematic substance use, sexual assault of non-partners, and transactional sex compared to their peers who did not perpetrate violence.

Widow inheritance, a custom which involves the marriage of a close relatives' widow is practiced in some settings in Africa (Floyd et al, 2008; Mabumba et al, 2007; Okeyo and Allen, 1994). Remarriage after divorce or widowhood is a risk factor for HIV infection when there is HIV discordancy in the new partnership (Reniers, 2008). Reniers (2008) report that while marriage is often perceived as a "shield" from HIV infection, in southern region of Malawi where divorce, remarriage and HIV infection prevalence are higher than the other two regions of the country, marriage rates for widows and divorcees have both dropped. He reports that in this setting, individuals were using union-based-

risk avoidance strategies such negative selection (avoidance of widows for marriage) to prevent HIV spread. Whether this approach is effective or not deserves further study.

Another factor that has been postulated as contributing to the heightened risk of HIV infection within marriage is the use of dry sex traditional medicine (DSTM). Baleta (1998) and Scorgie et al (2009) have reported that motivations for DSTM use among South African women include their desire to enhance men's sexual pleasure, ensure men's fidelity and exercise agency and control in their relationships. Mbikusita-Lewanika et al (2009) have reported that dry sex was associated with religion among Zambian women. Women who belonged to mainstream Christian denominations were more likely to use DSTM compared to other women. Many of these women using DSTM were reported to adhere to traditional views and beliefs about womanhood and marriage, and had a poor sense of self-worth or less confidence.

Women's socio-economic status

It is widely acknowledged that socio-economic status influences women's vulnerability to HIV infection (Gollub, 2006; Kim et al, 2008; Proynk et al, 2008). Researchers and women health advocates have supported efforts of identification of "women controlled" HIV prevention tools (such as vaginal microbicides and female condoms) in part due to the realization that the majority of women are unable to refuse sex, or at least suggest 'safer' sex in relationships (Bisika, 2009). The identification and promotion of interventions such as the female condom and vaginal microbicides are motivated within a framework of understanding that women's low social status prevents

them from influence male behavior (Kaler, 2001; Resenberg and Gollub, 1992; Gollub, 1993; 2000; 2006).

Babalola (2006) has reported that women's perceived self-efficacy to refuse sex when the male partner does not want to use a condom was associated with increased condom use. Maganja et al (2007) have reported that young women's economic dependence of their sexual partners affected their decision to use condoms. Because of their low social status (Mataya, 2007; White et al, 2005) women may have also low self-efficacy and so may not influence condom use. Another plausible but opposite hypothesis is that women who are empowered may be more likely themselves to be infected as they are likely to experience life outside of the home where they may obtain sexual partners.

In an environment where heterosexual intercourse is the main mode of HIV spread, a woman's risk of being HIV infected will, among other factors, depend on not only her own behaviors (just as is the case with males) but that of her sexual partner(s). Religion has a bearing on many of these factors which include: partner's alcohol use; multiple or concurrent partnerships; premarital and extramarital sex; transactional sex and ability to access and use condoms. The low social status of women is often accepted by most of the religions in Malawi.

Age and HIV infection

Age is an important determinant of HIV transmission. The transmission of HIV from mother to child transmission or vertical transmission which occurs in-utero and intra-partum (for fetuses) and post-partum (infants and children) via breastfeeding is relevant only to young children and fetuses (Biggar et al, 2008; Chasela et al, 2007;

Kumwenda et al, 2008; Taha et al, 2007). The personal behaviors responsible for HIV spread among children and adults (e.g. sexual intercourse and intravenous drug use, alcohol use) and some socio-demographic characteristics associated with HIV (marital status, education) are age-related. Sexual and drug use behaviors are often initiated in adolescence or young adulthood. Not surprisingly therefore, HIV incidence and prevalence increase with age from adolescence into adulthood, and slows down in late 30s and over (Kiptoo et al, 2009). In heterosexually-driven epidemics, women's HIV incidence and prevalence peak up earlier than among men (Pettifor et al, 2005).

Age may be associated with religion in as far as decisions to join or leave any particular denomination or faith are concerned. Children often belong to the religions of their parents or guardians. However, as they move into adolescence or adulthood, they may have the opportunity to make decisions whether they want to maintain the religion of their families.

Tribe, circumcision and HIV

For the purposes of our study, we have defined tribe similarly to ethnicity. Ahmad and Bradby (2008) have identified the shared identities built on common cultures, histories, languages, and geographical regional affiliation as constituting an ethnic group. While such a definition has been preferred, we also recognized that cultures can be dynamic. In addition, just like other collective identities, ethnicity or culture comprise variables that influence, but do not fully determine, all the ways that people relate to each other or make sense of their world (Koffman et al, 2008).

Studies have reported on the non-uniform spread of HIV among racial/ethnic background in the United States, e.g. Clark et al, (2008); Espinoza et al (2007). In Malawi, there has been limited interested on the role that tribal identity may have on HIV infection. The study of tribes within the framework of HIV transmission may be valuable since one's affiliation may influence relevant sexual behaviors such as wife inheritance (Floyd et al, 2008; Luginaah et al, 2005; Mathunjwa and Gary, 2006), exposure to unsafe circumcision practices and age at sexual debut (Lau and Muula, 2004); all these factors are associated with HIV infection and may also be associated with religion. Women's vulnerability to HIV infection may be affected by the prevalence of circumcision or whether their partner is circumcised in so far as the protective effect in men translates in reduced risk among women.

The Yao of southern Malawi for instance, practice almost universal ritual male circumcision, which may be provided in non-sterile conditions with a high propensity of HIV transmission. Neonates and infant are not circumcised via ritual circumcision among the Yao. Ritual circumcision may also be associated with practices which have potential to reduce an individual's risk of being infected with HIV on one hand, and other practices which have potential to put people at risk. While male circumcision has been reported to be efficacious in preventing male acquisition of HIV in Eastern and Southern Africa (Auvert et al, 2005; Bailey et al, 2007; Gray et al, 2007), it is reasonable to examine whether the Yaos have a lower risk of being HIV infected if other factors are held constant. In fact when compared to a composite group of all tribes, Yao women attending prenatal care at the QECH, Malawi, were less likely to be HIV infected than , OR=0.71, 95% CI, 0.61-0.92 (Kwiek et al, 2008).

Unlike in other African setting where removal of the foreskin is partial (Peltzer et al, 2007), among the tribes of Malawi, circumcision is intended to be complete. Whether complete circumcision is achieved or not, is subject to future research.

The Sena of Southern Malawi, practice wife inheritance which may fuel the HIV epidemic in that area (Malawi Human Rights Commission, undated document). This practice, discouraged by most of the religions, but promoted among some indigenous Christian Churches, has potential to spread HIV in situations of HIV sero-discordancy.

In Malawi, just like in many other African countries, religion is an important determinant of male circumcision. According to the Malawi DHS summary report, prevalence of reported circumcision status overall was 20.7 percent but 93.3% among Muslims. At least 80% of the Yao (tribe) are circumcised or Muslim (National Statistical Office and ORC Macro, 2005; Ngalande et al, 2006; Thorold, 1993). Muslims comprise about 20% of the population in Malawi.

Velayati et al (2007) have argued that the North to South HIV gradient on the African continent (with northern countries having lower HIV prevalence estimates compared to the south) is indicative of religion-European colonialization interaction. These authors argue that the predominance of Islam in North Africa has facilitated the development of values, norms and public policies that discourage the spread of HIV. The same, the authors argue, has not happened in Southern Africa, hence HIV prevalence estimates in excess of 5 percent.

Three randomized controlled trials and dozens of observational studies have demonstrated that circumcision in males prevent their (males') acquisition of HIV infection and other sexually transmitted infection. Several mechanisms have been

proposed so far: 1) the foreskin has Langerhans cells that HIV may use as portal of entry into the body when exposed. Also the uncircumcised penis is likely to experience trauma during sexual intercourse and any tears or abrasions may later be portals of entry of HIV. In addition, it is reported that the penile hygiene is much more difficult in uncircumcised penis (O'Farrell and Quigley, 2005; O'Farrell, 2006). Lack of penile hygiene may facilitate development of inflammation, recruitment of white blood cells, which eventually may also be entry points of HIV.

In some Malawian cultures, there is perception that sexual intercourse with a circumcised male is more pleasurable to women than with a non-circumcised person (Ngalande et al, 2006). This may therefore follow that in the "sexual market", circumcised person may be desirable compared to non-circumcised counterparts.

The preference for circumcised men has also been reported elsewhere. In a US study, women who reported having had sex with circumcised as well as uncircumcised partners expressed preference for circumcised over uncircumcised partners, both for aesthetic reasons and various sexual activities (Williamson and Williamson, 1988). However, studies in other settings among women who had have sex with circumcised as well as uncircumcised men have not demonstrated such a preference (Hankins, 2007).

Different tribes have different perceptions towards sexual intercourse among young people. The Yao and the Lomwe are generally sexually permissive while the Northern region tribes (Tumbuka, Ngoni, Tonga) are restrictive. The Yao, largely Muslim even before colonial times (Bone, 1982; 2000; Mitchell, 1971), have practices which encourage early sexual debut. With respect to religion, the Yao tribe contributes

about 15%-20% of the Malawi population; at least 80 percent of the Yao are Muslims (National Statistical Office, 2000).

The northern tribes of Tumbuka and Ngoni, mostly Christians are patrilineal (inheritance is through paternal side) and virilocal (married woman stays with husbands family), and practice payment of *lobola* (bride price) often have delayed sexual debut and delayed marriage. Marital practices may affect HIV vulnerability in the country.

Whether circumcised men have heightened or reduced risk to HIV infection and the prevalence of circumcision within the sexual network the woman belongs to, will affect the woman's vulnerability to HIV.

Religion, place of residence and HIV infection

In Malawi, place (urban or rural; south, center or north) is associated with HIV infection just as it is also associated with region. Most of the Muslims are resident in the southern region while Presbyterianism is the largest religion in the north (Bone, 1982; Sicard, 2000). Human immune-deficiency infection prevalence is highest in the southern region compared to the other two regions (National Statistical Office and ORC Macro, 2005).

Religion, alcohol and HIV

Some religious groups have proscriptions against alcohol use or at least drunkenness. Alcohol users may also frequent bars, night clubs and other places where both alcoholic drinks and transactional sex are available (Kalichman et al, 2008). Bartkowski and Xu (2007) have reported that among American teenagers, integration

within religious congregation (demonstrated by attendance of worship services) was a deterrent against substance use. Kongnyuy and Wiysonge (2007) have reported that alcohol use was positively associated with having multiple concurrent non-spousal sexual partnerships among married men in Cameroon. Alcohol use has also been reported to be associated with multiple sexual partners and unprotected sexual intercourse which may expose an individual to HIV infection (Norris et al, 2009; Pylypchuk and Marston, 2008).

Multiple and concurrent sex partnerships

The prevalence of concurrent partnership in a sexually-driven HIV epidemic is a driving force in its maintenance or spread of infection. Kiraguet et al (2007) reported that among Zambian health workers, 26% reported having concurrent sexual partnerships. History of multiple sexual partners has been reported to be associated with HIV infection in various settings (Yahya-Malima et al, 2007) Nikula et al (2007) have reported that in Finland HIV positive men were more likely to have multiple sexual partners, engage in casual sex and avoid long-term relationships than if not infected. Kongnyuy and Wiysonge (2007), using data from the Cameroon Demographic and Health Survey-2004 have reported that among Cameroonian males, use of alcohol was associated with multiple, concurrent non spousal sexual partnerships. However religion was not associated with multiple sexual partnerships.

Previous studies from the country have reported that concurrent sexual partnership is common, and a double standard exists where having multiple sexual partners is often expected of males, but not females (Gosh and Kalipeni, 2005; Kalipeni and Gosh, 2007; Smith and Watkins, 2005; Swidler and Watkins, 2007; Tawfik and

Watkins, 2007). Concurrent sexual partnerships, defined as sexual partnerships that overlap in time (Adimora et al, 2007; Aral, 1996; Morris and Kretzschman, 1995; Watts and May, 1992), are also common and contribute to the spread of HIV. All these behaviors are discouraged by most religions in the country.

Concurrent partnerships may be culturally acceptable for men, but not among women, in some societies (Carter et al, 2007). Sexual network studies suggest that network characteristics are important determinants of the dynamics of HIV spread (Helleringer and Kohler, 2008; Lagarde et al, 2001). The majority of religions discourage concurrent sexual partnership, a position which, if adhered to would prevent the spread of HIV infection.

Men who have sex with men

Much of the HIV transmission in Africa occurs via heterosexual intercourse. In the first two decades of the HIV epidemic, little attention was directed towards exploring the extent of men having sex with men (MSM) in Africa. Lately however, there has been increasing recognition of MSM- associated behaviors that may impact the HIV epidemic on the continent. Parry et al (2008) have reported that among MSM who agreed to have HIV testing in South Africa, one-third tested positive. In this sample, injecting drug use (IDU) was common. Sander et al (2007) however, have reported that in Mombasa, Kenya, drug use was rare among MSM.

Data on MSM in Malawi are limited. Muula (2007) conducted an exploratory qualitative study of the print media to explore social discourse about MSM in the country Overall however; there were reports of acceptance, denial, stigma and discrimination

towards MSM. Ntata et al (2008) have reported on an exploratory study on the socio-demographic characteristics of MSM, their health-related knowledge and access to HIV prevention services. Recently, Baral et al (2009) have assessed HIV sero-prevalence among a snow-ball sample of Malawian MSM in which prevalence was at 21.4%. While this estimate may not be representative of the all MSM in the country, the study has highlighted the need to consider same-sex male intercourse in our understanding of HIV in Malawi. Because of the lack of data on MSM within the MDHS and MDICP data sets, the role of MSM and religion, or any other variables was not explored the present study. However, virtually all religions in Malawi discourage men having sex with men.

Women vulnerability to HIV infection will be affected if they are linked to sexual networks with bisexual men. While reports from other setting have shown high HIV sero-prevalence among bisexual men and risk behaviors (Kajubi et al, 2008; Li et al, 2009; Mercer et al, 2009), and these could impact women's vulnerability, we have no data on what role bisexual practices influence women vulnerability in Malawi.

Religion and stigma

Dovidio et al (2000) have defined stigma "as a process by which individuals with devalued physical, behavioral or medical attributes experience prejudice, discrimination, stereotyping, and exclusion." Nyblade (2006) has categorized stigma into the following groups: perceived stigma; enacted stigma (discrimination) and felt or internalized stigma (an individual's self-assessment as being unworthy). Perceived stigma has been defined as the extent to which an individual perceives the public is able to stereotype and discriminate against a particular (stigmatized) group (Corrigan 2004; Nyblade, 2006).

Internalized self-stigma may manifest as self-hatred, shame, blame or people feeling that they are being judged by others, so they isolate themselves. According to Nyblade (2006) people enact self stigmatization when they isolate themselves from their families and communities.

Fear of HIV associated stigma has been reported to be associated with failure to access HIV prevention programs including HIV testing (Meiberg et al, 2001). Stigma is also associated with high risk sexual behaviors and delayed access to treatment, and support services (Preston et al, 2004; Schuster et al, 2005).

Due to the stigma associated with HIV among some religious communities, religious individuals may be at enhanced risk of either transmitting HIV to their sexual partners or acquiring infection. This is because they may avoid getting the knowledge and skills which may assist them to avoid HIV infection. Disclosure of HIV sero-status may be limited among religious people. In a study of HIV infected persons in France, Préau et al (2008) found that religious people were less likely to disclose their HIV sero-positivity to their partners. Such fear of disclosure in a HIV non-concordant partnership potentially exposes their sexual partners to infection. The potential for social stigma in the event that one is infected with HIV may be a strong enough disincentive against premarital sex or extramarital sex.

In a study in Tanzania, Zou et al (2009) reported that it was common among Catholics, Lutherans and Pentecostals; about half of the respondents (53.2%) to believe that HIV is a punishment from God. In addition, about a third of respondents (34.9%) believed that those who are HIV-infected have not followed the Word of God.

In the current study, we proposed that because of fear of HIV associated stigma, people who are religious are likely to access and utilize HIV preventive measures in order to prevent HIV. As HIV infection may be associated with the perception that an infected person has been "cursed" or "punished" by God (Adogame, 2007; Foster, 2006; Hlongwana and Mkhize, 2007), religious individuals would do all they can to avoid infection.

Religion may also have the opposite effect when, because of HIV associated stigma, religious individuals believe they 'have nothing to do with HIV' and so may be unaware of preventive measure or do not access prevention measures. In reality however, the same people who may believe they should not get concerned with HIV issues are exposed to social situations associated with HIV transmission. Hamra et al (2006) have reported in a study from Kenya that stigma was associated with poor knowledge about AIDS and negative attitudes toward testing. The stigma associated with HIV, in some instances facilitated or fought by religions could impact on an individual's vulnerability to HIV infection.

Religion and sexual conservatism

Virtually all religious groups discourage extra-marital and premarital sex (Rostosky, Wilcox, Wright, & Randall, 2004). An individual who is religious may be more likely to exercise self-control/restraint in acquiring sex partners out of wedlock. Multiple studies have reported that concurrent sexual partnerships (Adimora et al, 2007; Benefo, 2008) which may be extramarital or premarital sexual intercourse are risk factors for the acquisition of HIV infection (Kongnyuy and Wiysonge, 2007; Phinney, 2008).

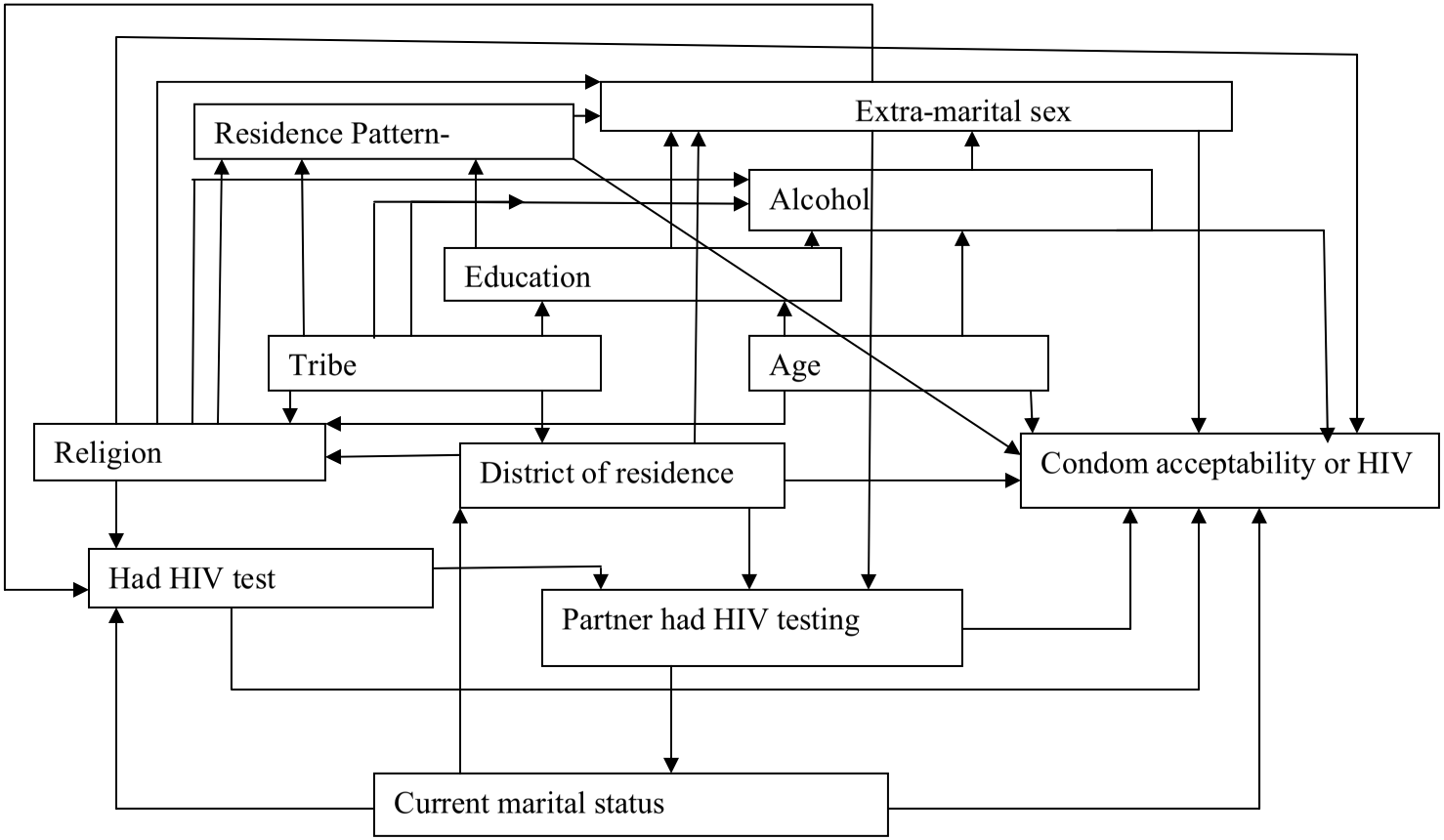
Religion and risk perception

HIV risk perception may differ by religion. Religion may confer attitudes of higher personal responsibility among its members. Religion may also have paradoxical effects on adherents as some people may hold perceptions that they are protected from harm by a higher power and personal agency is not necessary for risk reduction. Other people may hold views regarding pre-destination of outcome i.e. rationalizing that it is has been pre-ordained that an outcome will occur and therefore an individual does not have to spend time attempting to change a future outcome that has already been destined to occur (Heiss and McKinney, 2007).

Lagarde et al (2000) have reported that in a study of Senegalese men resepondents who considered religion to be very important in their lives were less likely to report AIDS as a major health problem and were less likely to perceive themselves to be at risk of getting HIV. Women who considered religion to be very important in their lives were less likely to report an intention to change their sexual behaviors to protect themselves from HIV. They were also less likely to report having discussed AIDS with their colleagues. Trinitapoli and Regnerus (2006) reported that perceived vulnerability to HIV infection in rural Malawi differed by religious affiliation. If perceived vulnerability to infection eventually affects sexual behaviors, then it may be considered that these (sexual behaviors) could differ among the religions and eventually HIV transmission and acquisition.

A conceptual framework (below) summarizes the relationships among religion, socio-demographic and behavioral characteristics and HIV infection or condom acceptability.

Figure 1. Conceptual framework for the association between religion and HIV infection Malawi



CHAPTER 3

RESEARCH DESIGN AND METHODS

This study was based on secondary analysis of two surveys: 1) the Malawi Demographic and Health Survey of 2004/5 and; 2) the Malawi Diffusion and Ideational Change Project (MDICP), a collaborative project of the University of Pennsylvania and University of Malawi. A comprehensive description of the two data sets is outlined below.

The Malawi Demographic and Health Survey

The 2004/5 MDHS was the third national demographic and health survey to be conducted in Malawi; previous surveys had been conducted in 1992 and 2000. Unlike the previous two surveys, the 2004/5 survey was the first that collected and tested bio-specimens for HIV in order to provide national estimates for HIV prevalence. Fieldwork, carried out by the National Statistical Office (NSO) in collaboration with the Ministry of Health (MoH) was done from October 2004 to January 2005. Technical support was provided by ORC Macro, Calverton, Maryland, United States.

The Malawi DHS 2004/5 was designed to provide up-to-date information several health indicators and information, behaviors related to HIV/AIDS and other sexually transmitted infections. The survey was designed as a follow up to the 2000 MDHS, a national-level survey of similar scope where knowledge, attitudes and practices regarding family planning, sexual behaviors, maternal and child health were surveyed. As stated

above, unlike the 2000 MDHS however, the 2004/5 survey collected blood samples for HIV testing which enabled the estimation of HIV prevalence in the country.

Sample design of the Malawi Demographic and Health Survey

The MDHS survey was designed to provide representative estimates of health, sexual behaviors and demographic indicators at the national, regional or provincial levels, and district estimates for a selected list of large districts which were oversampled. A total of 522 sampling clusters were drawn from the 1998 Malawi Housing and Population Census (MPHC) sample frame: 458 in rural and 64 in urban areas. The oversampled districts were: Mulanje, Thyolo, Zomba, Blantyre and Mangochi; Lilongwe, Salima and Kasungu; and Mzimba, in southern, central and the northern regions respectively.

Based on the 1998 MPHC, the National Statistical Office (NSO) conducted a listing of households in each of the selected clusters in August and September 2004. From the lists, a systematic sample of households was drawn to select a total of 15,091 households. All women aged 15-49 years in the selected households were eligible for individual interview. All males, 15-54 years old from every third household were also recruited. For HIV testing, all males and females, in every third household were eligible to submit bio-specimens for HIV testing.

Data collection and processing in the MDHS

Survey administration was conducted by trained research assistants in teams, each consisting of one supervisor, one field editor, four to five female interviewers, and one male interviewer. As far as practically possible, female survey participants were

interviewed by female research assistants. There were therefore more female research assistants as the survey aimed to interview more women than men. Two or three of the interviewers in each team were trained in taking blood samples to be analyzed for HIV infection; at least one of these was medically trained. Four senior NSO and one staff from the MoH supervised and coordinated fieldwork activities. In addition, three health technicians were assigned to supervise the blood collection.

Total sample size recruited in the Malawi Demographic and Health Survey

A total of 15,041 households were selected for the survey, of which 13,965 (92.8 percent) were occupied. Of the occupied households, individuals in 13,664 households were interviewed, yielding a household response rate of 98 percent. In the 13,664 interviewed households, 12,229 women age 15-49 years were identified as eligible for the individual interview, and interviews were completed for 11,698, for a 96 percent response rate.

Every third household in the sample was selected for HIV testing, resulting in 4,071 eligible women. Of the eligible women, 2,686 (66%) women were successfully HIV tested. Nearly one quarter (22.5%) refused HIV testing and the remainder 12.5% was never home either for the interview or specimen collection. Socio-demographic characteristics (including tribal affiliation) and sexual behaviors data were collected. Of the 2,686 women with HIV testing, 2,609 (97.1%) had ever had sex and are the focus of the present analysis.

Blood specimen collection and testing in the Malawi Demographic and Health Survey

Whole blood was collected via finger prick and analyzed in the field using two rapid HIV test kits i.e. Determine ® (Abbott Diagnostic Division, Hoofddorp, The Netherlands) and Unigold® (Trinity Biotech plc of Bray, Ireland). Both Determine® and Unigold ® have sensitivity and specificity values of at least 98%, positive predictive value (PPV) 92%, negative predictive value (NPV) 100% and test efficiency of 99.16% under field conditions (Awazu et al, 2000; Dessie et al, 2008; Sherman et al, 2008; van den Berk, 2003). A parallel interpretation algorithm (Joint United Nations Programme on HIV/AIDS, 1997) for the results was used; a sample was determined as positive if both tests were reactive; indeterminate if only was one reactive and negative when both were negative. Samples with indeterminate test results were subjected to Western blot analysis and the results of this test were deemed final.

The Malawi Diffusion and Ideational Change Project, 2006

A comprehensive description of the MDICP, with regard to its aims, sampling design and setting, has been described elsewhere (Bignami-Van Assche et al, 2007; Boileau et al, 2009; Mensch et al, 2006; 2008). The MDICP of 2006 was conducted in three administrative districts of Malawi (Rumphi, Mchinji and Balaka), one in each of the three regions (provinces) of the country. The survey collected data on sexual behaviors, religion and religiosity, self perceived risk of HIV acquisition and HIV status among individuals 15 to 49 years.

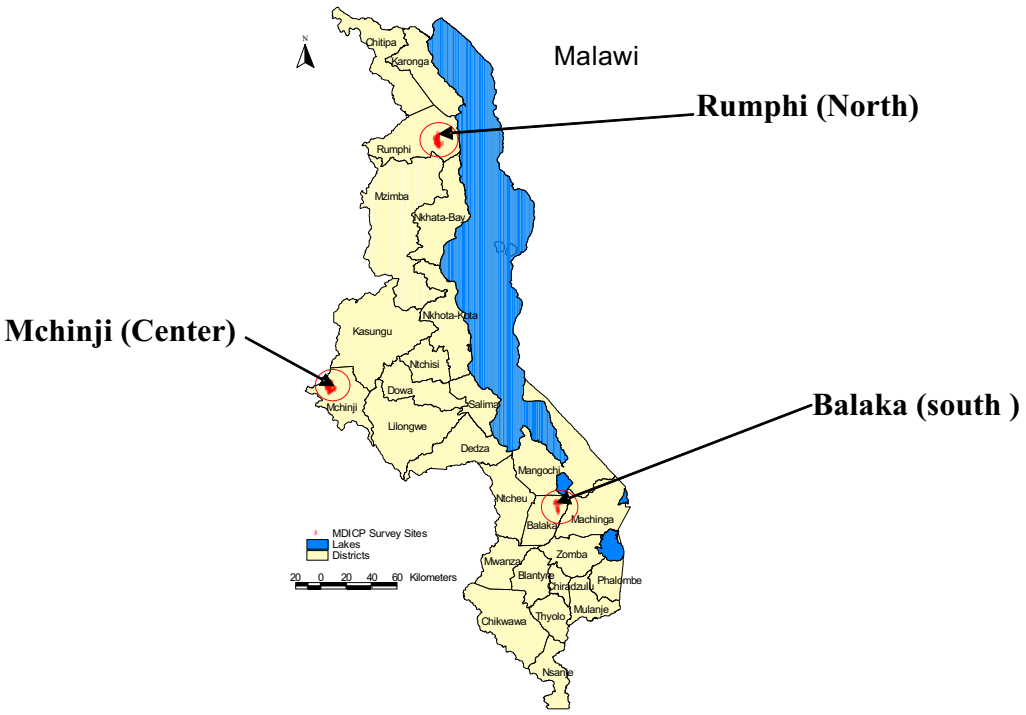
Rumphi district, in the Northern region of the country, has a patrilineal system of kinship and lineage and virilocal residence pattern (a married woman lives in her husband's village). The Tumbuka tribe inhabits the district and is predominantly Presbyterian Protestant. Balaka district, in the Southern region, follows a matrilineal system of kinship and lineage system. Residence pattern is uxirolocal i.e. a married man leaves his village and lives in his wife's village. Balaka is largely inhabited by the Yao who are predominantly Muslim. There is also a sizeable population of Catholics. Mchinji district, in the central region, follows a less rigid matrilineal system whereby residence may be matrilocal or patrilocal depending on the fulfillment of certain marital cultural requirements. Mchinji is inhabited by the Chewa and Sengas, both of these groups are largely Christians.

Sampling strategy in the Malawi Diffusion and Ideational Change Project

In each district a cluster sampling strategy was used with a total of 145 villages eventually selected. In Mchinji and Rumphi districts, the sampling plan aimed to cover Census Enumeration Areas (CEAs) included in the 1988 Traditional Methods of Child Spacing in Malawi (TMCSM) survey (Kalipeni and Zulu, 2003). Household lists of individuals reporting as being normally resident in those villages were compiled by the research team in the week prior to fieldwork. A sample of eligible married women was then randomly selected from the household list. A married man was selected into the study if his wife was selected into the study; never married men aged 15 years or above were also selected from the same households.

Since villages varied in size, sampling fractions were used that were inversely proportional to village populations, such that a higher proportion of eligible women in the smaller villages was sampled. HIV testing was done only among adult groups (i.e. non-adolescents). About 500 households were selected in each of the districts. Figure 1 shows the map of Malawi showing locations of the MDICP study sites.

Figure 2. The Malawi Diffusion and Ideational Change Project's study sites.



Source: Malawi Diffusion and Ideation Project-University of Pennsylvania

Data collection in the Malawi Diffusion and Ideational Change Project

Survey questionnaires were administered via face to face (FTF) interviews by trained research assistants in Chichewa language (for Mchinji and Balaka) and Tumbuka for Rumphi. Each survey participant was interviewed in private; and as far as was practical, same sex matching between interviewer and interviewee was practiced.

Bio-specimen collection for HIV tests in the Malawi Diffusion and Ideational Change Project

Trained nurses were responsible for collecting saliva specimens which were used to determine HIV infection status. According to the HIV testing protocol, the nurses had to first administer a short questionnaire to survey participants on health, sexually transmitted infections (STIs), and HIV knowledge, attitudes and practices (KAP). Upon completion of the questionnaire, they explained to the interviewee the HIV testing procedures and requested them for consent to submit a saliva specimen. Saliva was collected using OraSure oral swabs (OraSure Technologies, Bethlehem, Pennsylvania, USA). OraSure test was chosen because of its high sensitivity and specificity, (i.e., between 99.6 %– 100% for both tests), ease of administration and high acceptability under field conditions (Bauseman et al, 1999; Judson et al, 1996). In Uganda, relative to serum testing, the sensitivity and specificity of saliva testing was 95% and 99% respectively (Grant et al, 1996). The oral fluid specimens were tested for HIV using ELISA test kits for initial screening; specimens with positive results were confirmed by a western blot test.

At the end of fieldwork, a different group of trained nurses gave back HIV test results to those survey participants who wished to know their HIV status. Post-test counseling was provided to study participants, if this was acceptable to them.

Human subjects

Since our study was based on secondary analysis of publicly available data sets, we requested and were granted institutional (IRB) exemption from the Public Health and Nursing IRB of the University of North Carolina at Chapel Hill.

Data analysis and statistical measures

For Aim 1, the MDHS data were used while data from the MDICP were used to answer Aim 2. Our exposure of interest was religion, represented as self-reported denominational affiliation. Our outcome measures were: HIV infection and acceptability of condom use within marriage. HIV infection was a binary variable (infected versus not infected) based on an antibody test result from bio-specimen.

Univariate and descriptive analysis

Descriptive analysis was carried out in order to describe the sample in terms of prevalence of socio-demographic and behavioral characteristics. We calculated frequencies of the number of individuals with specific socio-demographic variables characteristics. We also calculated the proportions of individuals with a particular characteristic (prevalence, $\hat{p}$) by computing A / N, where A refers to the number of individuals with the characteristic (e.g. HIV infection) and N represents the total number of individuals who could have that characteristic in the total or stratified by a third

characteristic. The 95% confidence intervals [CIs] were computed and presented where appropriate. Means and the associated standard deviations, medians were calculated for continuous variables.

Bivariate and multivariate analysis

In order to assess if a categorical variable's distribution differed by a second variable, we conducted Pearson's Chi square tests. In addition, using logistic regression analysis, we conducted analyses to assess the association between key behavioral factors or HIV infection and religion. As less that 0.6% of the sample was neither Christian nor Muslim, our assessment of the association between religion and HIV or sexual behaviors excluded individuals with no religion or those with other religions (i.e. not Christian and not Muslim).

We also run backward multivariate logistic regression models to estimate the independent effect of religion on the following outcomes: HIV infection; acceptability of condom use within marriage; premarital sex and extramarital sex. Prevalence odds ratio (PORs) was the measure of effect.

We hypothesized that some variables e.g. place of residence, tribe, education, circumcision status and age could modify the religion-HIV or religion-sexual behavior association (the "main effect"). To examine these variables as possible effect measure modifiers (EMMs), we compared the magnitude and precision of the main association within each level of a possible modifying covariate (Rothman and Greenland, 1998; Selvin, 2004). A decision was also made a priori that in the analysis we would stratify the analysis by sex (males only or females only). For each potential EMM, we conducted

a logistic regression model including the religion variable, the outcome and the potential EMM, plus an interaction term between religion and the possible EMM. We assessed the p-value for the interaction term, and interpreted values lower than α=0.10 as evidence of substantial heterogeneity in the stratum-specific measures of effect (Rothman and Greenland, 1998; Selvin, 2004). Variables whose associated interaction term was associated with p-values were <0.10 were eligible to be included in the 'full' multivariate models as effect measure modifiers.

No variables was identified as an important EMMs by the criteria set above. All covariates were therefore assessed as potential confounders. To assess whether a confounder variable would be included in the final model; we ran two logistic regression models i.e. the first model containing the outcome, exposure, other variables, including the specific covariate. We also run another model with the specific covariate (potential confounder) removed from the model (i.e. backward elimination strategy). We then compared the ORs generated by the two models by taking the ratio of the two estimates [OR_{model} with confounder/OR_{model} without potential confounder)]. A >5% change between the ORs of the two models) was interpreted as sufficient evidence to retain the variable under consideration as an important confounder in the multivariable model.

The following general logistic regression model form was used:

Logit (outcome=1) = $\beta_0 + \beta_1$(exposure) + β_2(covariate1) + β_3(exposure*covariate1) + β_4(covariate k)

where, β_0= beta estimate for the intercept; β_1= is the beta estimate for the exposure; β_2= beta estimate for covariate 1; β_3= beta estimate for covariate 3, and β_3= beta estimate for the k^{th} covariate

Our interpretation of the measure of effect (i.e. the OR) leans towards the approach espoused by Gardner and Altman (1986), Martínez-Sellés et al (2005), who have argued, that when estimation and not hypothesis testing is the goal of the study, reporting confidence intervals provides more relevant information than just p-values.

We interpreted the point estimate as the value of maximum likelihood, but the whole range within the 95% confidence interval as plausible although different points have different probabilities. Walter, (1995) has advocated a compromise where both p values and confidence interval estimates can be used and provide the reader with the opportunity to make informed decisions. We recognize that strong arguments have also been advanced in favor of p-values (e.g. Thompson, 1987); and so where appropriate, we present our results with their associated p-values. Data were analyzed using Stata 10.1 software (StataCorp, College Station, Texas, United States).

CHAPTER 4

RELIGION IS NOT ASSOCIATED WITH HIV INFECTECTION AMONG WOMEN IN MALAWI

Abstract

Introduction

Religious affiliation has been associated with human immune-deficiency virus (HIV) prevalence in India and South Africa. There has been limited research that has explored whether any such association exists in Malawi.

Methods

The current study, using data from the Malawi Demographic and Health Survey (MDHS) 2004/5, was conducted to examine the association between religion, HIV infection and sexual behaviors among 15 to 49 year old women. Logistic regression analysis was used to assess the association.

Results

A total of 2,609 women, 2,181 (83.5%) Christians and 407 (15.6%) Muslims who reported ever having sex and had HIV test results within the survey were included. A total of 415 (15.9%, 95% confidence interval [CI]; 14.5%-17.3%) were HIV infected. Crude estimates showed that Seventh Day Adventists /Seventh-Day Baptists

(SDAs/SDBs) were more likely than Catholics to have had sex before marriage, (unadjusted odds ratio [OR] =1.69, 95% CI=1.08 - 2.62); to have used a condom at sexual debut, (OR=2.06, 95% CI=1.02 - 4.16); and to report ever having had an HIV test (OR=1.82, 95% CI=1.09 - 3.04). Residence in the southern region, older age, having ever been married (currently married, divorced or separated), membership in the Yao or Lomwe tribe, and having reported sexual debut before marriage were all positively associated with HIV infection. Christians were more likely to have ever tested for HIV, take alcohol or have a primary partner who drank alcohol compared to Muslims. In multivariate analysis assessing HIV infection, no differences were observed between Protestants and Catholics, Muslims and all Christians combined. There were also no differences in HIV infection observed between Catholics compared to individual religious denominations. The lack of disparity in HIV infection across religious groups was observed despite the fact that there were some differences in sexual behaviors such as premarital sex and condom use at sexual debut which have the potential to influence HIV risk.

Conclusion

Contrary to what has been observed in other settings, and despite some differences in sexual behaviors, we did not observe any difference in HIV infection prevalence among different religions in Malawi. The lack of sexual network boundaries defined by religion may explain this finding. There is a need to examine the resources that religious groups commit towards HIV prevention among their members.

Introduction

Malawi is one of the African countries with the highest general population human immune-deficiency virus (HIV) burden. The country's adult HIV prevalence is estimated at 12 percent (National Statistical Office and ORC Macro, 2005). Much of the literature on HIV and AIDS in sub- Saharan Africa which has concentrated on biological, clinical and behavioral risk factors for heterosexual and mother-to-child transmission (Baeten et al, 2007; Berkley et al, 1990; Bowers , 2007; Coombs et al, 2003; Gregson et al, 2000; Laga et al, 2001; Moscicki et al, 2001), has not focused on religion. Social factors that have been noted, and are possibly related to religion and the position of women in society, include the low status of women compared to men, the lack of acceptable female-controlled prevention devices such as the female condom, and poverty (Bärnighausen et al, 2007).

Malawi's population is 75%-80% Christian and 18%-23% Muslim (Chakanza and Ross, 1999). Religion may influence the status of women in society and sexual behaviors such as condom use, premarital sex, extramarital sex and polygamy which may consequently influence HIV infection (Gormally, 2005; Kalkhoran and Hale, 2008). However, limited research has been conducted to assess the role that religion plays in influencing HIV risk in Malawi.

In some settings, the prevalence of HIV infection among Muslims has been reported to be lower than in other religions. In a study from Kolkata, India, Talukdar et al (2007) reported lower odds of HIV infection among Muslim men, OR= 0.43 (95% confidence interval [CI] =0.29-0.67) compared to Hindu men. The difference was mainly explained as resulting from the protective effect of male circumcision; circumcision

being common among Muslims but rare in Hindus. Kagee et al (2005) have reported HIV prevalence of 2.6% among Muslims in Cape Town, South Africa, and compared this to the 11%-20% reported in the general population. While the representativeness of the Cape Town sample can be questioned, these authors main message was that Muslims had lower HIV infection than other faiths.

Ecological studies comparing HIV estimates between countries have also reported that in predominantly Muslim North and West African nations, HIV infection prevalence is lower compared to largely Christian Southern African nations (Drain et al, 2006; Velayati et al, 2007). While many of these studies have assessed or explained the differences in HIV prevalence as a result of the protective effect of circumcision, little is known about differences in sexual behaviors between religions that could explain the prevalence of HIV among religions. We are also unaware of any studies that have assessed differences in HIV prevalence, not just between Christians and Muslims, but among different individual Christian denominations.

The pattern of spread of both Islam and Christianity into Africa may have influenced the way these religions are practiced in these countries as compared to Western European nations (in the case of Christianity) and the Middle East (for Islam). The effect of religion on HIV and sexual behaviors elsewhere may not be the same as it is in southern Africa. Christianity, introduced in Malawi in the 1800s, is the predominant religion in the country; Islam came into the country in the 1400s, introduced by Swahili Arab traders from East Africa (Bone, 1982; Forster, 1997).

Christianity was introduction into Malawi through a separate route. Various expeditions of Christian Missionaries, led by Portuguese Catholics and closely followed

by Scottish Protestant missionaries, entered Malawi resulting in the eventual creation in 1891 of the predominantly Christian, British Protectorate of Nyasaland (Foster and Banda, 1999). Mission Christian denominations are [Christian] religions with their world headquarters in another country other than Malawi. The most notable was the British expedition, the Universities Mission to Central Africa (UMCA) in the mid 1800s (Stuart, 1979) whose aims towards the 'natives' were: i) "to raise the natives into spiritual fellowship with ourselves by the preaching of the Gospel and; ii) to raise them in the civilization by the encouragement of agriculture, and a lawful commerce, and the ultimate extinction of the slave trade" (Mulwafu, 2004). The lack of political space for Islam within Malawi (compared to Christianity) during the colonial period and between 1964 and 1994 may have prevented the full expression of the religion by its adherents.

Religions are engaged in the fostering of spiritual faith and the development of moral codes (Anslinger, 2003; Thielapappe, 2000) which may influence an individual's vulnerability to HIV infection. Virtually all religions have proscriptions concerning marriage and sexual relations such as extramarital and premarital sex, or divorce (Thomas, 2008). The teachings, accepted norms of sexual relationships, and the sanctions that may be rendered against people who fail to live up to the standards of a religion may influence the sexual behaviors of their adherents, and consequently, HIV infection. For instance Agha et al (2006) reported that premarital sex is often punished by excommunication among Seventh Day Adventists and Jehovah's Witnesses, while emphasis on forgiveness is expressed among Pentecostals in Zambia. These authors observed lower likelihood of premarital sex among Adventists compared to Pentecostals in those settings.

In a study of rural Malawi, Trinitapoli and Regnerus (2006) reported that there were differences in sexual behaviors, perception of vulnerability to HIV and history of sexually transmitted infections among rural Malawian men. Religion can also influence who and when one marries and for how long a marriage is sustained. Some Protestant denominations have liberal attitudes towards divorce and re-marriage compared to Catholics or Adventists. Polygamy while acceptable in Islam is discouraged among Mission Christian religious denominations in Malawi. African Independent Christian (AIC) and their parent mission denomination can vary in their attitudes towards polygamy, tithing, marriage and re-marriage after divorce, marriage of the clergy and the primary day of worship (Kalinga, 1982). Some of these differences, if impacting sexual behaviors, have the potential to affect vulnerability to HIV infection.

Marriage, often regulated by the state or religious denomination, remains a central institution for the monitoring or influencing of sexual behaviors, divorce, separation, cohabitation and extra-marital partnerships. However extramarital sex, divorce and remarriage are reported to be common in many parts of Malawi (Bracher et al, 2004) as is the case in other parts of Southern Africa (Caraël et al, 1995; 2001). Among married people in Lusaka-Zambia and Kampala-Uganda, 8-12% reported having had an extramarital affair in the past 12 months (Caraël et al, 2001). Extramarital relationships are a risk factor for HIV infection because a married person may not use condoms during intercourse both within marriage and outside (Chimbiri, 2007), thus enabling transmission of infection brought in from an outside sexual relationship (Dunkle et al, 2008; Maharaj and Cleland, 2005).

Some practices within religions, such as exclusion, blaming and shaming (stigma) may have negative impacts on personal behaviors (Link and Phelan, 2006). Exclusionary practices, including violence against people infected or affected by HIV and AIDS may be perceived by adherents as authorized by the Supernatural (Chikwendu, 2004; Cheemeh et al, 2006). While the fear of being stigmatized may also serve as a positive force, motivating individuals to avoid behaviors which put them at risk of HIV infection. However, the fear of stigmatization may lead to avoidance of HIV testing and non-disclosure to sexual partners and significant others when a positive test occurs.

Although religions may influence sexual relationships, sexual behaviors, and the risk of HIV infection, the scientific links between HIV and religion in Malawi are largely unexamined. Previous published reports from Malawi have reported on the association between sexual behaviors and perceptions of HIV vulnerability (Costa et al, 2004; Rankin et al, 2005; Trinitapoli and Regnerus, 2006). No reports have estimated the associations between religion and actual HIV infection. Furthermore, previous studies on religion and sexual behaviors have reported data from rural Malawi, which may not have been representative of the whole country.

We therefore carried out this study, using the Malawi Demographic and Health Survey (MDHS) of 2004-5, to examine whether an association existed between religion and HIV infection among 15-49 years old women in Malawi. In addition, we aimed to assess whether sexual behaviors explained the distribution of HIV infections among sexually active women of different religious groups.

Methods

The MDHS 2004-2005 was conducted in 2004-5. It is the most recent national survey conducted in Malawi in which HIV bio-specimens were collected and tested. The survey was designed to provide estimates of health and demographic indicators at national and three regional (provincial) levels, for rural and urban areas, and ten large districts (from a total of 27 districts) that were oversampled. In Malawi, the State President designates which areas are urban or rural; there are few scientific or demographical considerations involved (Muula, 2007). With the combined population of 1.55 million, the cities of Blantyre and Zomba (Southern region), Lilongwe (Central) and Mzuzu (Northern) comprise 11.8% of the 13 million national population and 80% of the urban population (National Statistical Office, 2008). Another 4% is dispersed in smaller urban centers and about 85% of the total population is rural.

To recruit a nationally representative sample, a stratified two-stage cluster sampling design was conducted in which 522 clusters were drawn from the 1998 census sample frame: 458 in rural areas and 64 in urban areas. Clusters were selected with a probability proportional to their sizes. On average 29 households were identified in each of the selected clusters. The households were identified systematically, with a pre-set number of households within the cluster thereby ensuring that each household had an equal probability of being selected (Bennet et al, 1991).

Fieldwork for the 2004-2005 MDHS commenced in October 2004 and was completed end of January 2005. The Malawi National Statistical Office (NSO) staff completed a listing of households in each of the MDHS clusters in August and September 2004. From the household lists, a sample of households was drawn for a total of 15,091

households. All women aged 15-49 years in the selected households were eligible for an individual interview. Every third household in the sample was selected for HIV testing, resulting in 4,071 eligible women. Of the eligible women, 2,686 (66%) women were successfully HIV tested. Nearly one quarter (22.5%) refused HIV testing and the remainder 12.5% was never home either for the interview or specimen collection. Socio-demographic characteristics (including tribal affiliation) and sexual behaviors data were collected. Of the 2,686 women with HIV testing, 2,609 (97.1%) had ever had sex and are the focus of the present analysis.

HIV laboratory testing

Whole blood was collected via finger prick and analyzed in the field using two rapid HIV test kits, i.e. Determine -1/2 (Abbott Laboratories, Abbott Park, IL) and Unigold (Trinity Biotech Plc of Bray, Ireland). Both Determine® and Unigold ® have sensitivity and specificity values of at least 98% under field conditions, positive predictive value (PPV) 92%, negative predictive value (NPV) 100% and test efficiency 99.16% (Awazu et al, 2000; van den Berk, 2003). A parallel interpretation algorithm (Joint United Nations Programme on HIV/AIDS, 1997) was used: a sample was determined as positive if both tests were reactive; indeterminate if only one was reactive; and negative when both tests were negative. Samples with indeterminate test results were re-analyzed with Western blot and the results of this test were deemed final.
Further details on the purpose and design of the MDHS and other Demographic and Health Surveys (DHSs) have been published elsewhere (Montana et al, 2008; National Statistical Office and ORC Macro, 2005; Uthman and Kongnyuy, 2008).

Data analysis

The outcome of interest for our analysis was HIV infection based on the blood test result. The primary exposure variable was self-reported religion. Survey participants were asked the question: What is your religion? Options provided were limited to: Catholic; CCAP (Church of Central African Presbyterians- a grouping of all Presbyterians in the country); Anglican; Seventh Day Adventist/Seventh Day Baptist; Other Christians; Muslim; No religion; and other religions. Study participants were allowed to report just one denominational affiliation. From the responses given, we created categories of Christians and Protestants.

Wealth was defined based on household assets (such as radio, bicycle, car, television, type of roofing, and floor) reported by the survey participant. Each asset was assigned a weighting value, using principal component analysis as described by the World Bank and ORC Macro (Rutstein and Johnson, 2004). A household was assigned a standardized score for each owned asset. For each household, these scores were summed and used to rank households into five wealth quintiles.

We assessed the bivariate association between HIV infection and religion. In order to explain any differences in HIV prevalence that may be observed, we also assessed whether sexual behaviors and HIV testing history differed by religion. Behavioral variables that are associated with HIV infection have previously been reported (Kansky, 1998; Kongnyuy et al, 2006; Kongnyuy and Wiysonge, 2007; Ntozi, 1997). The covariates were also assessed for effect measure modification. We assessed the p-value for the interaction term, and interpreted values lower than $\alpha=0.10$ as evidence

of substantial heterogeneity in the effect of the exposure (Rothman and Greenland, 1998; Selvin, 2004). No effect measure modification was found.

In multivariate analysis, we started with a full model with the outcome (HIV), exposure (religion) and the following covariates: age, wealth, tribe, region of residence (south, center and north), education (woman's and primary partner's), rurality/urbanicity and current marital status variables. The covariates were removed one at a time and change in odds ratio assessed. If removal of a covariate resulted in at least 5% change in effect estimate, it was retained, otherwise it was not further included in the final model. The analysis was conducted with Stata 10.1 (StataCorp, College Station, Texas, United States). Stata survey techniques for complex study designs were used.

The MDHS data we obtained from Macro Inc, Calverton, Maryland, United States did not include personal identifiers of survey participants. Therefore, we were granted institutional review board (IRB) exemption by the Public Health and Nursing IRB of the University of North Carolina at Chapel Hill (UNC-CH).

Results

Socio-demographics and Religion

A total of 2,609 women, 15-49 years old (median age 27 years) were included in the study. The response rate was 64.1%. There were 407 Muslims (15.6%), 2,181 (83.5%) Christians, 16 (0.6%), reporting no religion, 5 (0.2%) other religions and 2 (0.1%) missing. Among the Christians, 25.8% of them were Catholic, 20.1% Presbyterians, 7.3% Adventists or Seventh Day Baptists, 2.3% Anglicans and 44.4%

other Christian denominations. Other socio-demographic information is presented in Table 1.1.

HIV Prevalence

A total of 415 women (15.9%, 95% confidence intervals [CI], 14.5%-17.3%) were HIV infected. In urban areas, 78 (21.9%, 95% CI, 16.8%-27.1%) were infected while 332 (13.9%, 95% CI, 12.2%-15.6%) in rural women had a positive HIV result. Among Christians, 339 Christians (14.6%, 95% CI, 12.9%-16.4%) and 75 Muslims (18.4%, 95% CI 14.0%-22.8%) were HIV infected (Table 1.1).

Table 1.1 Frequencies (percent) of socio-demographic characteristics of women in the Malawi Demographic and Health Survey 2004-5.

Demographic and behavioral characteristic	Total	Self-reported religion	
		Muslim N (unweighted %)	Christian N (unweighted %)
Age group (in years)			
15-19	545 (19.0)	48 (11.8)	268 (12.3)
20-24	691 (24.1)	97 (23.8)	569 (26.1)
25-29	527 (18.4)	83 (20.4)	432 (19.8)
30-34	388 (13.6)	60 (14.7)	324 (14.9)
35-39	277 (9.7)	50 (12.3)	226 (10.4)
40-44	245 (8.6)	34 (8.4)	208 (9.5)
45-49	191 (6.7)	35 (8.6)	154 (7.1)
Level of education			
No education	674 (23.5)	177 (43.5)	477 (12.9)
Primary	1791 (62.5)	209 (51.4)	1392 (63.8)
Secondary and over	399 (13.9)	21 (5.2)	312 (14.3)
Primary partner's education			
None	358 (14.8)	112 (28.9)	240 (11.9)
Incomplete primary	1115 (46.0)	170 (43.8)	933 (46.3)
Complete primary	416 (17.2)	55 (14.2)	359 (17.8)
Incomplete secondary	261 (10.8)	31 (8.0)	229 (11.4)
Secondary	275 (11.3)	20 (5.2)	254 (12.6)
Wealth quintiles			
Lowest (Poorest)	499 (17.4)	79 (19.4)	380 (17.4)
Second	578 (20.2)	100 (24.6)	435 (19.9)
Third	645 (22.5)	98 (20.1)	493 (22.6)
Fourth	631 (22.0)	78 (19.2)	500 (22.9)
Highest (Least poor)	511 (17.8)	52 (17.8)	373 (17.1)
Residence type			
Urban	373(13.0)	36 (8.8)	284 (13.0)
Rural	2491(87.0)	371 (91.2)	1897 (87.0)

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Marital status			
Never married	419 (14.6)	15 (3.7)	150 (6.9)
Currently married or living as married	2097 (73.2)	325 (79.9)	1752 (80.3)
Divorced/separated	209 (8.7)	29 (7.1)	114 (5.2)
Widowed	99 (3.5)	17 (4.2)	82 (3.8)
Region of the country			
North	448 (15.6)	6 (1.5)	366 (16.8)
Center	976 (34.1)	88 (21.6)	783 (35.9)
South	1440 (50.3)	313 (76.9)	1032 (47.3)
Tribe			
Chewa	850 (32.4)	41 (10.1)	720 (33.0)
Tumbuka	322 (11.3)	2 (0.5)	268 (12.3)
Lomwe	535 (20.4)	22 (5.4)	485 (22.3)
Tonga	61 (2.3)	2 (0.5)	55 (2.4)
Yao	455 (17.3)	321 (78.9)	93 (4.3)
Sena	105 (4.0)	7 (1.7)	91 (4.2)
Ngoni	235 (9.0)	4 (1.0)	240 (11.1)
Nkonde	28 (1.1)	0	23 (1.1)
Uses alcohol	73 (35.7)	3 (0.7)	69 (3.2)
Primary partner uses alcohol	751 (35.7)	49 (13.8)	494 (40.4)
HIV infection	421 (14.7)	75 (18.4)	339 (15.5)

Sexual Behavior by religion

As shown in Table 1.2, when all Christians were compared to Muslims, there was no statistically significant differences in condom use at first sex or at last sex, premarital sexual debut or sexual debut at marriage, having had sex with a non-marital sexual partner in the past 12 months, and history of abnormal vaginal discharge. Christian women were however more likely to have ever been tested for HIV, to have taken alcohol or to have a primary partner who has taken alcohol.

Table 1.2: Proportions of women with selected behavioral characteristics by religion among in Malawi*

Characteristic	Christian	Muslim	p-value
Used condom at first sex	15.5 (124/824)	11.9 (17/143)	0.32
Used condom at last sex	5.2 (100/1907)	4.5 (16/359)	0.54
Sexual debut was at marriage	38.3 (433/1130)	35.0 (63/180)	0.39
Had sex with non-marital partner in last 12 months	8.1 (155/1908)	6.4 (23/358)	0.27
Had abnormal vaginal discharge	3.2 (69/2169)	4.0 (16/404)	0.42
Sexual debut was premarital	38.1 (706/1852)	34.3 (122/356)	0.17
Ever had HIV test	16.3 (351/2159)	10.2 (40/394)	<0.01
Alcohol use	3.2 (69/2171)	0.7 (3/405)	<0.01
Primary sexual partner uses alcohol	40.4 (694/1719)	13.8 (49/355)	<0.01

*number of study participants with characteristic/total who had information on characteristic or question as denominator

We also compared different behaviors by religion with Catholics as the referent. As shown in Table 3, Seventh Day Adventists or Seventh-Day Baptists were more likely than Catholics to report sexual debut before marriage (OR=1.69, 95% CI, 1.08-2.62), to have used condoms at first sex (OR=2.06, 95% CI, 1.02-4.16) and to have ever tested for HIV (OR=1.82, 95% CI, 1.09-3.04). Anglicans were less likely to have had premarital sexual debut compared to Catholics (OR=0.51, 95% CI, 0.27-0.91). 'Other Christians'

were less likely to use condoms at sexual debut (OR=0.54, 95% CI, 0.31-0.96) or at last sex (OR=0.43; 95% CI, 0.23-0.81) compared to Catholics (Table 1.3).

Table 1.3. Unadjusted prevalence odds ratios of religions on sexual behaviors or socio-demographic variables among ever-married women in the Malawi Demographic and Health Survey, 2004-5.

Characteristic	Self-reported religion					
	Presbyterian	Seventh Day Adventist/ Seventh Day Baptist	Anglicans	Other Christian	Muslim	Catholic
Sex with non-marital partner in past 12 months	1.38 (0.76-2.48)	1.21 (0.56-2.60)	2.59 (0.89-7.49)	0.78 (0.47-1.31)	0.91 (0.47-1.74)	1.0
Used condom at first sex	1.08 (0.57-2.04)	2.06 (1.02-4.16)	1.97 (0.46-8.46)	0.54 (0.31-0.96)	0.86 (0.39-1.87)	1.0
Sexual debut was at marriage	1.07 (0.70-1.64)	0.63 (0.38-1.04)	2.05 (0.87-4.80)	0.98 (0.69-1.39)	0.74 (0.49-1.12)	1.0
Condom use at last sex	1.30 (0.67-2.52)	0.76 (0.25-2.29)	1.93 (0.72-5.17)	0.43 (0.23-0.81)	0.61 (0.27-1.39)	1.0
Had abnormal vaginal discharge	0.90 (0.38-2.13)	1.37 (0.52-3.57)	0.31 (0.04-2.54)	0.86 (0.43-1.71)	1.64 (0.72-3.71)	1.0
Sexual debut was premarital	0.77 (0.56-1.06)	1.54 (1.03-2.32)	0.49 (0.27-0.90)	0.85 (0.65-1.13)	0.92 (0.65-1.29)	1.0
Ever had HIV test	1.28 (0.83-1.98)	1.82 (1.09-3.04)	1.05 (0.45-2.44)	0.88 (0.63-1.25)	0.81 (0.51-1.29)	1.0

Note: 95% confidence intervals in brackets

Association between HIV and socio-demographic factors

In bivariate analysis, women in the age groups between 20 and 49 years old, were 3.4 to 4.6 times likely to be HIV infected compared to women in the age group of 15-19 year olds. Widowed or divorced women were more likely to be HIV infected compared to never married women. Women in the southern religion were 2.66 times (95% CI, 2.05-3.46) likely to be infected compared to women in the central region. Women who belonged to Yao or Lomwe tribes were more likely to be infected compared to the Chewa, OR= 1.88 (95% CI, 1.42-2.50) and 1.63 (95%, 1.20-2.28) respectively. The least poor were almost twice as likely to be HIV infected (OR=1.92, 95% CI-1.32-2.73) compared to the poorest.

Association between HIV infection and religion

In bivariate analyses, no differences in HIV infection were found between Catholics and individual religious denominations, between Muslims and Christians, or between Protestants and Catholics (Table 1.4).

Table 1.4. Unadjusted prevalence odds ratios (ORs) and 95% confidence intervals (CI) for the relationship between socio-demographic characteristics, religion and HIV infection among Malawian women in the 2004-5 Demographic and Health Survey.

Characteristic	Odds ratio (95% CI)
Age	
15-19	1.00
20 -24	3.37 (1.95-5.81)
25-29	3.96 (2.29-6.87)
30-34	4.64 (2.65-8.14)
35-39	4.64 (2.59-8.32)
40-44	4.10 (2.25-7.47)
45-49	3.49 (1.85-6.60)
Marital status	
Never married	1.00
Currently married or living together	1.74 (1.00-3.66)
Widowed	7.62 (3.87-15.02)
Separated/divorced	4.05 (2.19-7.49)
Region of the country	
Center	1.00
North	1.27 (0.86-1.88)
South	2.66 (2.05-3.46)
Tribe	
Chewa	1.00
Tumbuka	0.82 (0.54-1.26)
Lomwe	1.88 (1.42-2.50)
Tonga	1.52 (0.75-3.10)
Sena	1.02 (0.55-1.89)
Nkonde	1.90 (0.69-5.21)
Ngoni	1.42 (0.97-2.09)
Yao	1.63 (1.20-2.22)

Wealth status	
Poorest	1.00
Second	0.83 (0.57-1.21)
Third	1.21 (0.85-1.71)
Fourth	1.41 (1.00-1.99)
Least poor	1.92 (1.35-2.73)
Woman's educational attainment	
No formal education	1.00
Any primary	0.98 (0.76-1.26)
Secondary or more	1.22 (0.87-1.73)
Primary partner's educational status	
No formal education	1.00
Incomplete primary	0.91 (0.65-1.27)
Primary	1.17 (0.80-1.71)
Incomplete secondary	1.34 (0.88-2.04)
Complete secondary or higher	1.23 (0.81-1.86)
Religion	
Catholic	1.00
Presbyterians	0.76 (0.53-1.08)
SDA/Seventh Day Baptists	0.88 (0.54-1.43)
Muslim	1.12 (0.81-1.56)
Anglican	1.24 (0.60-2.57)
Other Christians	0.92 (0.69-1.21)
Catholic versus Protestant	
Catholic	1.00
Protestant Christians	0.86 (0.66-1.11)
Christian versus Muslims	
Muslim	1.00
Christian	0.81 (0.62-1.07)

In our initial full multivariate model, Seventh-Day Adventist/Seventh Day Baptist women were less likely to be HIV infected compared to Catholics, adjusted odds ratio (AOR)= 0.57 (95% CI, 0.33-0.97). However in the final model when we eliminated covariates, no

differences were observed, AOR= 0.64 (95% CI, 0.39-1.05). No differences were also observed between Protestants and Catholics or between Muslims and Christians (Table 1.5).

Table 1.5. Adjusted prevalence odds ratios* (OR) for the association between religion and HIV among women in Malawi 2004-5.

Model	Religion	Full model POR (95% CI)	Final model POR (95% CI)
Model 1*	Catholic	1.00	1.00
	Muslim	0.87 (0.54-1.41)	0.93 (0.66-1.31)
	Presbyterian	0.71 (0.47-1.05)	0.79 (0.55-1.14)
	Adventists/Seventh Day Baptists	0.57 (0.33-0.97)	0.64 (0.39-1.05)
	Anglicans	1.24 (0.53-2.91)	1.22 (0.58-2.57)
	Other Christians	0.98 (0.72-1.34)	0.97 (0.73-1.29)
Model 2**	All Protestants	0.84 (0.63-1.11)	0.86 (0.66-1.11)
	Catholic	1.00	1.00
Model 3***	All Christians	1.07 (0.69-1.67)	1.01 (0.67-1.54)
	Muslim	1.07	1.00

Full model controlled for: age, region of the country, rurality, woman's education, primary partner's education, current marital status, tribe, wealth

*controlled for wealth, region and age

Discussion

We assessed whether self-reported religion among women who reported ever to have had sex was associated with HIV infection in Malawi. After comparing Catholics to Protestants, Christians to Muslims and Catholics to all the other religions, we found no association between religion and HIV infection. Our findings do not confirm previous findings from other geographical settings with heterosexually-driven HIV epidemics which have reported lower HIV

prevalence among Muslims compared to Christians or other faiths (Drain et al, 2006; Talbott, 2007; Velayati et al, 2007).

The influence of Islamic religion has been reported as protective against HIV in other settings (Drain et al, 2006; Gray, 2004) perhaps in part due to widespread male circumcision (Bone, 1982). At least 93% of Muslims men in the Malawi Demographic and Health Survey of 2004-5 reported being circumcised followed by Adventists/Seventh Day Baptists at 21.2%; Presbyterians had the lowest prevalence of circumcision at 6.1% (National Statistical Office and ORC Macro, 2005). However, our study was only among females, and so any expected protective effect expected from male circumcision would have been indirect. In addition, the protective effect of circumcision is only partial; high risk sexual behaviors such as extramarital sex, unprotected premarital sex and sex with sex workers, can undo the benefits that may have been accrued from high circumcision among Muslim men.

Islam is often associated with 'conservative' sexual beliefs and practices (Drain et al, 2006), however in Malawi the protective effect from HIV acquisition among Muslim women was not observed. Sexual behaviors among Muslims women did not appear to differ much from those of Christians. Islamic teachings which may influence sexual behaviors in other settings may not receive the same attention in Malawi. Sicard (2000) has reported that the moral instruction of strict Tahzib al-Akhlaq (moral and social reforms), which is traditional in *madrasahs* (Islamic schools) in countries where Islam is the predominant religion, is not taught or is little emphasized in the Malawian setting where Islam is a minority religion. Malawian Muslims therefore, may not have the same in-depth understanding and observant practices of Islam as occurs in fellow Muslims in countries where Islamic teachings are emphasized. The reasons behind this state of affairs include: the lack of local funding and overreliance of

inadequate foreign funding for the establishment of *madrasahs* and the modification of Islam which has imported traditional cultural practices within its teachings (Sicard, 2000).

Religious syncretism (Steward, 1999) or hybridization (Fielder et al, 2000), is a process where merging or blending of originally distinct religions, beliefs or traditions results in a religion with a similar name as is practiced elsewhere, but practiced differently in a new location. In Malawi, most religious denominations established strongholds in geographical areas where the traditional cultural practices were similar, tolerated or least modified by the incoming religious influence (Kelley et al, 2000; Foster, 2000; Langworthy, 1971; Lohrentz, 1971). Sicard (2000) reported of the Islamicization of the Yao funeral rite of *Sadaka* a funeral rite, which traditionally is associated with suspension of sexual taboos, promotion of extra-marital and premarital sex but has incorporated religious components thus legitimizing it among Muslims. The fusion of faith and statecraft in predominantly Islamic nations is not the case in predominantly Christian nations such as Malawi (Bouhdiba, 1985; Mernissi, 1987; Englund, 2003). Therefore to expect that Islam would have the same influence on HIV as it has in North and West Africa, Middle East or South East Asian Islamic nation, may not be appropriate. The limited influence that Islam has had on national moral codes in Malawi may have resulted in minimal differences in sexual behaviors between Christians and Muslims.

There has been unprecedented growth of Islam since 1994 when Malawi underwent change from one party rule a plural party society. In 1994, Bakili Muluzi, a Muslim, was elected president of this predominantly Christian country (Kaspin, 1995; Wiseman, 2000). This experience itself is instructive. In some way, this was evidence enough that Malawian Christians do not perceive significant differences between themselves and Muslims (Kaspin, 1995; Wiseman, 2000). In addition, the social boundaries that may have existed or remained between

Muslims and Christians may have been further diminished. The experience of having a Muslim State President provided social visibility, access to resources and prestige for, thus Islam resulting in the growth in members of the faith. Such growth may have resulted in the break down of sexual network boundaries that had resulted in the low HIV prevalence estimates that may have existed among persons of Muslim faith.

The fact that 44.4% of the sample in this study belonged to "other Christian" denominations attests to the fact that overall the majority of Christians have a range of doctrinal and behavioral characteristics that were grouped together in the analysis. There has also been growth in African Independent Churches or African Initiated Churches or African Indigenous Churches (Anderson, 2001; Meyer, 2004) in Malawi, that are largely converts from other mission religions; in some cases as offshoots from other AICs. Recent converts may act as bridges, linking the new religion's sexual networks to the sexual networks in their old religion. As a result, sexual networks bridging among religions may be enhanced which may reduce HIV prevalence differences among religions. In addition, as many of these AICs have been established as a challenge to the doctrines of the traditional mission churches (Englund, 2003; Ross, 1996), the loss of members from mission churches (e.g. Catholics, Presbyterians and Adventists) may have influenced the traditional mission churches to modify their doctrines in order to be competitive in the religious market (Ayuk, 2002).

The lack of association between religion and HIV infection could also be explained by the concept of "dependent happenings". First defined by Sir Ronald Ross in 1916 (Halloran and Struchiner, 1991), "dependent happenings" is when the incidence of an infection or disease depends on the number of people already infected (Bottero, 2007). In the case of HIV, an individual's risk of being HIV infected is dependent on the prevalence of infection within their

sexual networks. In virtually all societies, homophily, endogamy and homogamy exist to varying degrees. Homophily, is the fact that people are more likely to be associated with others who are socially similar to themselves, while endogamy is when people marry or have sexual partners within one's one socio-cultural or racial group (Kalmijin, 1998). Homogamy exists when people are having partners similar in social or cultural standing and qualities as oneself (Kalmijin, 1998; Lord, 2008). The extent to which these practices occur in Malawi remains to be explored. However, in societies where endogamy is high, people are likely to get sexual or marital partners within their own religion. We suggest that in societies where individuals are more likely to select sexual partners within their own religion and inter-religious partnership is rare; such societies can have distinct HIV epidemics. In Malawi, it is likely that inter-religious sexual partnerships are common, thereby blurring HIV prevalence differences. We however suggest that future research explore the extent to which endogamy and homogamy with regard to religion occurs in Malawi.

Not only do inter-faith or inter-religious sexual networks remove barriers for the spread of HIV, these relationships may also undergo specific strains which facilitate extra-marital sex. Lord (2001) has reported better spousal communication and marital satisfaction in intra-faith marriages compared to cross faith marriages. Intra-faith marriages have been reported to demonstrate high familial love, self-esteem, marital stability and family values (D'Antonio et al, 1982). The high prevalence of cross-faith marriages in Malawi may contribute to reduced marital satisfaction and consequent extramarital sex (by husband, woman or both) that contributes to HIV spread in Malawi. Studies in other settings have documented high marital instability, poor satisfaction and higher than normal divorce rates in inter-faith marriages (Chintz and Brown, 2001; Gleckman and Streicher, 1990; Heaton and Pratt, 1990). Shehan et al (1990) however did

not find high marital dissatisfaction among inter-faith married Catholics in the United States who continued to be involved with their churches. Whether similar experiences may be observed in Malawi, remains to be elucidated.

In assessing the role of religion on HIV, Talbott (2007) found that the percentage of Muslims within a population was highly correlated with a country's circumcision prevalence and negatively correlated with HIV prevalence. However the percentage of Muslims in a country was insignificant when the percentage of sex workers in a population was included in the analysis in a multivariate model. Unlike in traditional North African or Middle Eastern Muslim countries where sex work is overtly suppressed and may in fact be less prevalent (Mernissi, 1987), this is not the case in Malawi. Although not the dominant religion, Islam is not suppressed in the country. The religion's prominence has been significant since 1994 when the first Muslim President was inaugurated (Bouhdiba, 1985). Therefore the comparison of HIV prevalence between geopolitical settings where Islam is the predominant religion with women having significantly less control in sexual relationships and Malawi where women have significant control of their sexual lives is problematic (Schatz, 2005).

In comparing sexual and HIV preventive behaviors between Christians and Muslims, we found that there were no differences in terms of condom use at sexual debut or last sex, premarital sex, and abnormal vaginal discharge in the past year. However, Christians were more likely to have had HIV testing, to use alcohol or have a primary sex partners who used alcohol. As HIV infection between Christians and Muslims were no different in multivariate analysis, this would suggest that these differences were not robust enough to mediate an association between religion and HIV infection.

This study had a number of strengths. Unlike data from surveys which recruit participants from localized populations, the MDHS was national in scope and with a large sample size aimed to be representative of the general adult population of the country. Furthermore, since bio-specimens were collected for the assessment of HIV infection, the MDHS 2004 provided an opportunity to enable examination of the association of variables such as religion to HIV infection and not just sexual behaviors.

Despite the strengths of the present study, there are several limitations. Firstly data were cross sectional; therefore it is not possible to ascribe causation to the exposure. Secondly, we had a religion variable but no data on religiosity or spirituality both of which may be better markers of an individual's expression of their faith or relationship with a Higher Being. The data available however only permitted an examination of religious identity but not religiosity or spirituality (Hall et al, 2008). Furthermore, almost all data (except HIV test results) were collected via self reports. To the extent that study participants misreported, our findings may be biased. However, we are not aware of any reasons why any particular religious group would have differentially misreported compared to others.

The religious groups could be more finely categorized especially in the "other Christian denominations" group which included Mission and African Independent Pentecostal and Evangelical Churches. It is not known, however, whether such further categorizations would have demonstrated differences in HIV, as the theological differences between the religions may be limited, and in some cases, not at present all (Peel, 1968). In addition, the categorization of areas as rural or urban in Malawi is problematic (Muula, 2007), thus comparison of our results with findings from other countries in terms of urban versus rural disparities need to be made cautiously.

While this study was concerned with assessing the role of religion on HIV infection, the data available would not enable us to explore the role of other variables such family values (Dittus et al, 2004) or the role of migrant labor to and from Malawi within the southern African region. We did not explore the role of migration, an important HIV-relevant factor in southern Africa, where migrant labor is common across national boundaries (Gifford, 1994; Mkaya-Mwamburi et al, 2003). With most of the Southern African countries having HIV prevalence of at least 10 percent (23.9% in Botswana, 23.2% in Lesotho, 11.9% in Malawi, 12.5% in Mozambique, 15.3% in Namibia, 18.1% in South Africa), migration of people across the countries of region has the potential to affect HIV infection in Malawi (Joint United Nations Programme on HIV/AIDS, 2008).

Future longitudinal studies following up sexual behaviors and HIV incidence and qualitative studies aimed to gain in-depth understanding of the role of religion in shaping sexual behaviors have the potential to improve our understanding of the role of religion in HIV infection. With virtually all Malawians reporting belonging to an organized religion, efforts to provide interventions against HIV are likely to reach most people if the cooperation and involvement of religious denominations is granted. In addition, future studies should also explore the role that religion plays in shaping not only individual sexual behaviors but how religion influences the creation and maintenance of sexual networks (Adams, 2007).

Conclusion

In the predominantly Christian society of Malawi where almost all people are affiliated with one religion or the other, and Islam is the second largest religion, differences in HIV prevalence by religion was not observed as has been reported in other settings. This lack of

disparity was the case despite the fact that there were some differences in sexual behaviors such as in premarital sex and condom use at sexual debut by religion which have the potential to influence risk of HIV infection. We suggest that the lack of sexual network boundaries in Malawi, defined by religion, may explain this finding.

Public health practitioners and medical practitioners caring for individual patients should give due consideration to the opportunities and the limitations that religion has in influencing sexual behaviors and HIV infection. Different religions should also encourage self-assessments of their doctrines and prevention measures promoted to avert the HIV crisis, and identify opportunities for improvement to prevent further spread of HIV in Malawi.

CHAPTER 5

RELIGION AND CONDOM USE ACCEPTABILITY AND USE WITHIN MARRIAGE AMONG RURAL WOMEN IN MALAWI

Abstract

Introduction

Correct and consistent condom use within an HIV-discordant partnership could prevent sexual transmission of human immunodeficiency virus (HIV). An individual's perception towards condoms may influence actual use.

Methods

Data on ever-married women from rural Malawi were obtained from the Malawi Diffusion and Ideational Change Project (MDICP) of 2006. Using logistic regression analysis, we assessed the strength of association between religion and acceptability of condom use within marriage in general and also when one of the partners is suspected or known to be HIV infected.

Results

A total of 1,664 ever-married women, 1,467 (88.1%) of whom were currently married, 129 (7.8%) divorced or separated and 68 (4.1%) widowed participated in the MDICP 2006. The median age was 34 years (inter-quartile range 25-43 years). A total of 66.7 (95% CI, 63.7-69.5) % believed that it was acceptable to use condoms within marriage when one of the partners suspects or knows that the other was HIV infected. A smaller proportion believed that condoms

were acceptable within marriage generally, 38.2 (95% CI, 35.9-40.5) %. Only 13.8% (95% CI, 11.5-16.0) % of the sample, reported that that they had ever used condoms within the current or most recent marriage.

In multivariate analysis, there was no difference in acceptability of condoms within marriage between Christians and Muslims, or between Catholics and all but one of the individual denominations assessed. Presbyterians were less likely to report condom acceptability than Catholics, adjusted odds ratio (AOR) =0.59 (95% CI, 0.36-0.96) when a partner was suspected or known to be HIV infected.

Conclusion

Christian women in rural Malawi were no more or no less likely to accept condom use than Muslim women. Presbyterians however were less likely than Catholics to accept condom when a partner is suspected or known to be infected. In general however, there was no difference in attitude toward condom use within marriage among Malawian women. Future studies should explore whether teachings on condom use within marriage differs among the various religions in Malawi.

Introduction

Consistent and correct condom use may be associated with 80% reduction in human immune efficiency virus (HIV) risk (Davis and Weller, 1999; Weller and Davis, 2001). Despite sexual transmission of HIV being common within marriage, condom use in long-term relationships is low (Dunkle et al, 2008; Higgins et al, 2008; Montgomery et al, 2008; Moyo et al, 2008; Oddens et al, 1994; Versteeg and Murray, 2008).

Considering condom use within marriage, and especially when effective contraceptives are available, forces the couple to face the difficult realization that one or both of the partners may be infected by a sexually transmitted infection (STI), including HIV. Bauman and Berman (2005) have documented this difficulty even among unmarried adolescents who have reported that as their (sexual) relationships become established and trust is created and nurtured, condom use becomes erratic. Among South African students, those who were able to negotiate with their partners so that condom use was not perceived as lack of trust were more likely to use condoms than those who believed that condom use meant lack of trust (Taylor et al, 2007).

Marriage is an independent risk factor for the acquisition of HIV via unprotected sexual intercourse in a sero-discordant relationship (USISP) in many parts of sub-Saharan Africa (SSA), where the HIV epidemic is generalized (Glynn et al, 2001; 2003; Smith, 2007). Mermin et al (2008, p.544) reported that among married study participants in Uganda with recent HIV infection, 38% of the incident infections occurred among people whose spouses had long-standing infection, 14% in spouses with recent infection, and just under half (49%) had spouses who were not HIV infected. Dunkle et al (2008) have estimated that 55.1% to 92.7% of new heterosexually-acquired HIV infections among adults in urban Zambia and Rwanda occurred

within sero-discordant marital or cohabitating relationships. Furthermore, these authors also suggested that interventions for couples which reduced transmission from 20% to 7% every year could avert 35.7% to 60.3% of HIV infections in these settings.

Even before the global HIV epidemic, controversies about condom use were not uncommon (Blonna, 1988). While condom promotion among young unmarried persons has attracted attention, i.e. the dispute over whether it encourages premarital sex among this age group, (Moszynski, 2008), condom use within HIV-discordant married couples may be less controversial (Gormally, 2005; Greinrich and Brathwaite, 2005). However condom use within marriage is often an unreliable means of preventing HIV transmission as use is often inconsistent. In rural Malawi, Chimbiri (2007) reported that the condom was perceived as "an intruder" within marriage, suggesting that it interferes with intimacy and trust when used within marriage.

Reports on condom use within marriage may be less informative when they report findings which ask married persons whether they would use or have used condoms without providing the context for such use. For instance, couples who are planning to have children or who are using modern and effective contraception are in a different situation compared to couples where HIV infection is known or suspected in a partner. In addition, reports have suggested that in many relationships, the duration (of the relationship) is positively associated with having ever used condoms but negatively associated with consistent use (Gallant and Maticka, 2004; Ku et al, 1994). Not only may couples have switched to other effective contraceptives, the frequency of sexual intercourse and attitudes towards each other may have changed (Ford et al, 2001; Shaffi et al, 2004).

Religion can influence attitudes toward condom use within and outside of marriage. By contributing to an individual's concept of identity or by normalizing certain values and beliefs (Gilbert, 2008), religion can influence an individual's preferences toward condom use. Religion can influence the perception that condoms are unnatural and therefore not acceptable within marriage (Crosby et al, 2008; Higgins et al, 2008; Ngalande et al, 2006; Richters et al, 2003). The adverse attitudes towards condom use among unmarried young people by some religions (Kalipeni and Ghosh, 2007) may spill over and generate similar adverse attitudes towards condom promotion within couples. Pfeiffer (2004) has reported that Pentecostal and African Independent Churches (AIC) in Mozambique have openly discouraged condom use among church members.

Some individuals may believe that divine intervention will protect them from HIV infection regardless of their own personal responsibility to avoid infection. Such people may believe that it was already pre-determined or pre-ordained that they will be HIV infected (Human Sciences Research Council, 2006). There may also be people who believe that God will protect them if they take personal responsibility towards reducing their vulnerability to HIV infection. Such people may have positive attitudes towards condom use as an effective tool against HIV acquisition.

In order to improve our understanding of the acceptability of condom use within marriage, we assessed whether condom use acceptability differed by religion in ever-married women in rural Malawi. Investigating condom use within marriage generally, and when there is a perceived risk of HIV infection offers, useful and different insights compared to assessing condom acceptability within marriage under all circumstances (even when there is no concern of HIV infection).

Method

Sampling strategy and study setting

We used data from the Malawi Diffusion and Ideational Change Project (MDICP) conducted in 2006 in three rural districts of Malawi: Rumphi in the north, Mchinji in the center, and Balaka in the south. The MDICP is a collaborative research project of the University of Pennsylvania and the University of Malawi. Comprehensive descriptions on the design, rationale and the conduct of data collection over previous rounds of the MDICP have been described elsewhere (Poulin, 2007; Watkins et al, 2003). The data collection attributes remained largely unchanged in the 2006 sample. The survey was conducted with the aim of collecting data on, among other topics, sexual behaviors, religion, self perceived risk of HIV acquisition and HIV serostatus among individuals aged 15 years or above.

Rumphi district has a patrilineal kinship, lineage system and virolical residence pattern (a married woman lives in her husband's village). The Tumbuka tribe, which inhabit Rumphi district are predominantly Presbyterian Protestant. In Balaka (south), the Yao who are the predominant tribe in the district are primarily Muslim, follow a matrilineal system of kinship and an uxirilocal residence pattern, i.e. a married man leaves his village and stays in his wife's village. There is also a sizeable population of Catholics in the district.

Mchinji district, in the center of the country, follows a less rigid matrilineal system whereby inheritance may be matrilocal or patrilocal and residence virilocal or uxirolocal depending on the fulfillment of certain marital cultural requirements. Mchinji is inhabited by the Ngoni, Chewas, and Senga; all of these tribal groups are largely Christian. The distribution of religions in the study districts follows the introduction of Islam by the Arabs in the 1400s and

Christianity by the British and South African Mission Protestants in the 1800s (Bone, 1992; Foster, 1997; Foster and Banda, 1999).

In each district, a cluster sampling strategy was used and a total of 145 villages eventually selected. Household lists of individuals normally resident in those villages were compiled by the research team a week prior to fieldwork. A sample of eligible married women was then randomly selected from the household list. About 500 households were selected in each of the districts and women aged 15 years or older in the selected households were recruited. In Mchinji and Rumphi districts the sampling was designed to cover Census Enumeration Areas (CEAs) included in the 1988 Traditional Methods of Child Spacing in Malawi (TMCSM) survey (Kalipeni and Zulu, 1993; Krugmann-Randolf, 1989; Srivastava and M'manga, 1991). Balaka was selected for its rural location and having a Yao and Muslim majority.

Since villages varied in size, sampling fractions were used that were inversely proportional to village populations, such that smaller villages were oversampled. Survey questionnaires were administered by trained research assistants in Chichewa language in Mchinji, and in Yao and Chichewa in Balaka and Tumbuka for Rumphi district. Each survey participants was interviewed in private. As far as was practical, women survey participants were interviewed by female research assistants. HIV testing was done from saliva samples using OraQuick^{TM} (OraSure Technologies, Bethlehem, Pennsylvania, United States of America).

Data analysis

The outcome variables were condom use acceptability within marriage in general and acceptability within marriage when one of the partners is known or suspected to be HIV infected. The outcomes were created from the responses to the questions: "Do you think it is acceptable to

use a condom with a spouse to protect against HIV/AIDS?" The second question was: "How about when one spouse suspects or knows that the other might have HIV/AIDS: is it acceptable to use a condom in that situation?" The exposure variable was religious faith or denomination (Christian, Muslim, Catholic, Presbyterians, Church of Christ, African Independent Churches (AIC), "other Protestants"- which was a combination of smaller protestant churches.

We calculated frequencies, proportions, means and medians of socio-demographic and behavioral characteristics in order to describe the sample. To assess whether a variable met the criteria for a confounder, we estimated its bivariate association with the exposure and the outcome. A two sided cut-off α-level of 0.05 was used.

We conducted multivariate logistic regression analysis to estimate the effect of religion (Christian versus Muslim) on the acceptability of condom use within marriage independent of confounders. The initial model had the outcome, exposure and all covariates (tribe, district of residence, whether married woman lived in her village, spouse's village or neutral place i.e. neither her village nor husbands village, educational level, current marital status, and age). These covariates have previously been reported to be associated with condom use or with religion (Kiene et al, 2009; Kongnyuy et al, 2008; Rankin et al, 2008; Washington et al, 2009), but not considered to be on the causal pathway. We arrived at the most parsimonious model through stepwise backward logistic regression. Potential confounders were retained in the model, if following their removal the effect estimate changed by at least 5%. Data were analyzed using Stata software, version 10 (Statacorp, College Station, Texas, United States).

We conducted power calculations using nQuery software (Statistical Solutions Limited, Saugus, Massachusetts, United States) to assess if the study had adequate power to show a

difference. With a two-tailed α of 0.05, the power to detect a statistically significant difference in condom acceptability between Christians and Muslims was 84%.

The MDICP research protocol was reviewed and institutional review board (IRB) approval granted by the University of Pennsylvania and University of Malawi, College of Medicine Research and Ethics Committee (COMREC). For the purposes of our study however, de-identified data were obtained from the University of Pennsylvania-Population Research Center. The protocol for our secondary analysis received IRB exemption from the Public Health and Nursing IRB, of the University of North Carolina at Chapel Hill (UNC-CH), United States.

Results

A total of 1,664 ever-married women participated in the MDICP 2006; their median age was 34 years (inter-quartile range 25-43 years). The study districts had nearly equal representation in the total sample: 526 (31.6%) in Mchinji, 569 (34.2%) in Balaka, 530 (31.9%) in Rumphi and 39 (2.3%) were uncategorized by district. Most of the women, (1,467 or 87.6%) were currently married, the remainder divorced, separated or widowed. The sample distribution by individual religions was: 281 Catholics (17.0%); 278 (16.9%); Presbyterians 400 (24.3) Muslims; 291 (17.6%) belonged to AIC and 88 (5.4%) were from other Christian churches.

The majority (57.1%) of women in Balaka reported having no formal education compared to a third (33.0%) in Mchinji and 3.3% in Rumphi. Christians were slightly younger (mean age, 34.8 years, 95% confidence interval [CI], 34.1-35.4) years compared to Muslims, 37.4 years (95% CI, 35.4-39.5) years, $p < 0.01$.

Prevalence of HIV infection and sexual behaviors

The overall HIV prevalence in the sample was 6.8 % (95% CI, 5.5-8.2). The prevalence of HIV infection by socio-demographic characteristics was as follows: currently married, 5.2 % (95% CI, 3.9-6.5); separated or divorced, 17.6 % (95% CI, 10.1-25.2) and; widowed, 22.2 % (95% CI, 10.8-33.7). Although HIV prevalence was lower among Christians (6.5%, 95% CI, 5.1-7.9) % compared to Muslims (9.4%, 95% CI, 4.2-14.5) %, the difference was not statistically significant, p=0.22.

Compared to Muslims, a slightly lower proportion of Christians had no data on HIV status (6.9% versus 7.7%), but the difference was not statistically significant, p=0.70. The prevalence of a history of extra-marital sex was the same for Christians (2.6%, 95% CI, 0.1-5.1) and Muslims, (2.6%, 95% CI, 1.8-3.5), p=0.96. Further description of the sample is shown in Table 2.1.

Table 2.1. Socio-demographic characteristics of rural ever-married women in the Malawi Diffusion and Ideational Change Project 2006

Characteristics	Muslim		Christian
Age in years			
Age 15 -24	62	(20.3)	161 (17.5)
Age 25-34	95	(31.1)	314 (34.2)
Age ≥35	149	(48.7)	444 (48.3)
Education			
No education	214	(63.7)	209 (19.2)
Primary education	120	(35.7)	778 (71.4)
Secondary or higher	2	(0.6)	103 (9.5)
Marital status			
Currently married	330	(98.2)	1052 (96.5)
Divorced/separated	4	(1.2)	11 (1.0)
Widowed	1	(0.3)	7 (0.6)
District of residence			
Rumphi	1	(0.3)	479 (43.9)
Mchinji	3	(0.9)	466 (42.8)
Balaka	332	(98.8)	141 (12.9)
HIV-related history			
Ever had HIV test	206	(61.3)	686 (63.1)
Knew HIV status	182	(88.4)	617 (90.1)
Primary partner tested	153	(46.2)	454 (42.6)
Residence after marriage			
Virilocal residence	77	(23.5)	747 (71.7)
Uxirolocal residence	238	(72.6)	217 (20.8)
Other residence	13	(4.0)	78 (7.8)

Table 2.2. Percentages of women who reported condom acceptability or use within marriage among women in rural Malawi, 2006.

Religious denomination	Acceptability of condom use		
	When HIV infection known/suspected in the partner*	**Under any condition**	**Ever used condom in most recent marriage**
Catholic	70.0 (63.0-76.6)	36.1 (30.4-41.7)	16.1 (10.3-22.0)
All Protestants	66.3 (62.5-70.1)	31.1 (28.1-34.2)	15.6 (12.1-19.0)
Church of Christ	61.1 (52.3-70.0)	37.0 (30.1-43.9)	10.4 (4.2-16.7)
Presbyterian	62.6 (56.0-69.3)	25.6 (20.4-30.8)	20.1 (12.5-27.8)
Indigenous Churches	70.1 (63.6-76.2)	28.4 (23.1-33.6)	11.9 (7.0-16.9)
Other Christians	71.8 (63.7-79.8)	38.3 (35.8-40.8)	21.4 (13.3-29.4)
Islam	64.8 (57.6-71.9)	56.2 (51.2-61.1)	10.1 (6.7-13.7)
All Christians	67.2 (64.2-70.2)	36.9 (34.5-39.4)	14.7 (12.1-17.2)

*condom acceptability when one suspects or knows that their partner in HIV infected

Association between socio-demographic characteristics, religion and condom use acceptability within marriage

We assessed the association between condom acceptability when HIV is suspected in a spouse or HIV positive infection status known and socio-demographic variables. The results are shown in Tables 2.3.

Christian women were 71% more likely than Muslim women to report condom use acceptability within marriage if their partner was suspected or known to be HIV infected, controlling for other factors. However the AOR included the null, 95% CI, 0.89-3.29. In the case of individual religious denominations, after controlling for age, tribe and education, Presbyterians were 47% less likely to have reported condom use acceptability compared to Catholics, AOR= 0.53 (95% CI, 0.32-0.88). However, there were no differences in condom acceptability within marriage between Catholics and the other non-Islamic religions i.e. other Christians, Church of Christ, African Indigenous Churches (Table 2.4). The same was found when Muslims were considered the referent (data not shown).

Table 2.3. Unadjusted prevalence odds ratios (OR) and 95% confidence intervals (CIs) of condom acceptability among ever-married women in the Malawi Diffusion and Ideational Change Project 2006.

Characteristics	**OR (95% CI)**
Marital status	
Married	1.00
Divorced or separated	0.60 (0.37-0.96)
Widowed	0.53 (0.27-1.03)
Education	
No formal education	1.00
Primary education	1.57 (1.14-2.16)
Secondary education	1.57 (0.88-2.78)
Age in years	
15-24	1.00
25-34	0.95 (0.64-1.40)
Age ≥35	0.81 (0.57-1.16)
Tribe	
Chewa	1.00
Yao	1.14 (0.79-1.66)
Lomwe	3.77 (1.43-9.99)
Tumbuka	1.60 (1.18-2.17)
Ngoni	1.69 (0.79-3.62)
Other tribes	1.52 (0.68-3.41)
Had extramarital affairs in current marriage	
No	1.00
Yes	0.80 (0.36-1.78)
Religion	
Muslim	1.00
Christian	1.34 (0.82-2.16)

Religion	
Catholics	1.00
Presbyterians	0.74 (0.48-1.13)
Church of Christ	0.69 (0.43-1.12)
African Independent Church	1.02 (0.66-1.58)
Other Christian	1.12 (0.68-1.85)
Muslims	0.82 (0.52-1.26)
Study site	
Mchinji	1.00
Balaka	1.54 (1.09-2.16)
Rumphi	1.78 (1.31-2.40)
Place of residence	
Husband's village	1.00
Wife's village	0.95 (0.71-1.28)
Other village	2.24 (1.17-4.82)
Uses alcohol	1.34 (0.57-3.29)
Ever had HIV test	1.44 (1.10-1.88)
Partner has had HIV test	1.19 (0.91-1.55)

Table 2.4. Adjusted prevalence odds ratio (AOR) and 95% confidence interval (CI) of the association between condom acceptability when HIV is suspected or known and religion among ever-married women in the Malawi Diffusion and Ideational Change Project 2006, controlled for education, age and tribe.

Religion	AOR (95% CI)
Catholic	1.00
Presbyterian	0.53 (0.32-0.88)
Church of Christ	0.59 (0.34-1.04)
African Indigenous Churches	0.83 (0.49-1.40)
Other Protestants	1.41 (0.66-3.02)
Muslim	1.33 (0.58-3.07)

Association between condom acceptability and reported use within marriage

Women who believed that condoms were acceptable when HIV infection was known or suspected in a spouse were 10% less likely to have used condoms themselves, AOR= 0.90 (95% CI, 0.43-1.88). As this model included religion as a covariate, the odds ratio represented the effect of the belief that condoms were acceptable over and above the role of religion. Removing religion from the model resulted in a substantial change in the effect estimate, i.e. AOR=0.49 (95% CI, 1.00-2.04), although the 95% CI still barely included the null.

Condom acceptability in general was associated with a 24% increase in having ever used a condom in the most recent marriage, independent of education, tribe, age and religion (AOR =

1.24 (95% CI, 0.75-2.07)). The effect was about half as much when religion was removed from the multivariate model, suggesting that some of the influence of condom acceptability was explained by religion (AOR=1.12 (95% CI, 0.69-1.83))

Christians were 27% more likely than Muslims to report having used ever a condom in their current or most recent marriage, (AOR= 1.27 (95% CI, 0.49-3.30)), after controlling for tribe, though not with statistical significance.

Table 2.5. Adjusted prevalence odds ratio (AOR) and 95% confidence interval (CI) of the association between condom use and religion among ever-married women in the Malawi Diffusion and Ideational Change Project 2006 controlling for age, tribe and education.

Religion	AOR (95% CI)
Catholics	1.00
Presbyterians	0.77 (0.34-1.76)
Church of Christ	0.70 (0.28-1.79)
African Indigenous Churches	0.55 (0.25-1.74)
Other Protestants	1.79 (0.75-4.30)
Muslims	1.26 (0.44-3.64)

Discussion

In a study of ever-married rural women in Malawi, we found no differences in condom use acceptability within marriage between Muslims and Christians. Catholics were also no different in condom acceptability compared to the majority of individual religious denominations. However, Presbyterians were less likely than Catholics to report condom acceptability when one partner was known or suspected to be infected.

We had hypothesized that Muslim women would be less likely to accept condom use or less likely to use condoms within marriage. Malawian Muslim women are more likely than Christian women to be in polygamous marriages. Being in a polygamous marriage could limit a woman's power to bargain for condom use when she suspects or knows that her spouse is HIV infected (al-Krenawi, 1998; Slonim-Nevo and al-Krenawi, 2006). However, the fact that condom acceptability and reported use among Muslims did not differ significantly from Christians suggests that this mechanism may not be applicable or that Christians had their own barriers to condom acceptability. In addition, our findings may suggest that different faiths or denominations in Malawi were promoting or failing to promote condom use within marriage equally.

We recognize that our findings may not be applicable to women in other socio-political and cultural settings even when they share the same religion with their Malawian counterparts. We suggest that the expression of and the influence of religion in people's lives differ depending on the prevailing socio-cultural and political environment. In addition, the observed difference in condom acceptability between Catholics and Presbyterians, if not due to chance, may suggest the heterogeneity that exists within the Christian faith.

The grouping of Malawian Muslims into one denomination may have masked heterogeneity within Islam. Malawian Muslims are largely Sunni Muslims, but other Shias also exist. Malawian Sunni Muslims are largely Sukuti or Quadriyya Sufis. Any comparisons made between Muslims in Malawi and their counterparts elsewhere such as Iran (with the majority of the population being Shia and the country is a theocracy), or where different sects of Sunni predominate may be problematic (Bone, 1998; Sicard, 2000; Thorold, 2003; Sekalesfar, 2008).

In a study of Ivoirian youths (15-24 years), Koffi and Kawahara (2008) found differences in sexual behaviors by religion. Unmarried males who were neither Christian nor Muslim were less likely to be sexually abstinent compared to those who were Christian or Muslim. Although we measured condom use rather than sexual activity, we found that when compared to Catholics, only Presbyterians were less likely to believe that condom use within marriage was acceptable. However, actual condom use did not vary by religion.

Compared to Presbyterianism, Malawian Catholicism is more conservative in that it discourages promotion or use of modern contraception. As a consequence, Presbyterian churches involved in community HIV prevention programs include condom promotion within marriage, while Catholics generally do not. Catholic organizations or institutions discourage condom use as is the situation elsewhere (Kinsman et al, 2001; McCarthy, 2009; Roehr, 2009; Shannon, 1991). We had expected that the liberal position on condoms taken by Presbyterians would result in more acceptability of condoms than among Catholics. However, we found the opposite. Additional studies are therefore required to explore the reasons for this paradoxical finding.

Higher proportions of women, in the overall sample and in all the religions, expressed condom use acceptability within marriage compared to the proportions of women who reported ever using condoms in their current or most recent marriage. We also found that there was no

difference in condom use between women who believed that condoms were acceptable within marriage and those who held no such beliefs. Our findings suggest that a positive attitude alone is not enough to influence behaviors. Condom use depends on the willingness of a partner to use one, condom availability and access, as well fertility intentions of the couple (Eaton et al, 2009; Jones et al, 2009; Homsy et al, 2009; Oddens, 1997; Panozzo et al, 2003; Ventura et al, 2000). However, we did not assess whether the women had knowledge of their partner's HIV status or had suspected that he may be infected. The questions on acceptability in an HIV serodiscordant marriage were therefore hypothetical for some while for others this represented their actual current situation. It is possible that some women would have answered differently if they themselves were in a situation where the husband was infected or suspected to be so.

In a study conducted in KwaZulu Natal, South Africa, Maharaj and Cleland (2003) reported that a woman's perceived risk of HIV infection from her partner was an important predictor of eventual condom use. However, Anglewicz et al (2008) reported that both men and women in rural Malawian were only able to estimate their spouse's HIV infection status poorly, often over-estimating. However, women were slightly better than men at estimating their spouse's HIV status. If perceived risk of within marriage HIV acquisition would encourage condom use, then more women would prefer condom use to prevent infection when they know or suspect that a partner is infected.

In a South African study, Camlin and Chimbwete (2003) reported no association between condom use at last sex and knowing someone with HIV or who had died of AIDS. Studies in Zimbabwe (Gregson et al, 1998), South Africa (Ijumba et al, 2004; McIntyre et al, 2001) have demonstrated an association between knowing someone with HIV or AIDS and condom use, delayed sexual debut and decreased number of sexual partners among youths. In a systematic

review of studies from Sub-Saharan Africa, Foss et al (2007) in a condom intervention program within primary partnerships reported that post-intervention condom use was low unless one partner was knowingly HIV-infected or at high risk of infection or the couple was avoiding pregnancy. Mitchell et al (2007) in the United States have also reported that knowing someone who died from AIDS was associated with reduced risk taking among injecting drug users (IDUs). In our study however, women who had a positive attitude towards condoms were no more or no less likely to have used condoms compared to those with a negative attitude.

In this study, women who were widowed, separated or divorced had higher prevalence of HIV than currently married women, 22.2%, 17.6% and 5.2% respectively. It is plausible to suggest that among the widowed women, many of them had become widowed after losing their husbands to AIDS (Caldwell, 1997). Some of the women, following the death of a husband may have be pushed into poverty (Mendenhall et al, 2007; D'Souza, 2000). With limited economic opportunities, some may have engaged in transactional sex thus being exposed to HIV infection.

The absence of a statistically significant difference in HIV prevalence between Christians and Muslims deserves further study.

The present study had several limitations. Firstly, data were collected via self-reports. To the extent that study participants misreported, this may have biased our results. Although it is possible to verify reports of condom use in recent sex (within a day or so after intercourse) using laboratory markers on vaginal swab specimens (Gallo et al, 2006), such an approach was not feasible in the MDICP. Secondly, as data were cross sectional, we can not assign causation between religion and the outcomes. In some instances HIV infection may have led to a change in religion.

The question about acceptability of condom use within marriage did not allow an assessment of whether the attitude differed if it was the spouse or the woman herself who was or was suspected to be HIV infected. This may be the case as an individual's desire, practice and commitment to prevent HIV transmission may be different when it is the person himself or herself who is actually or potentially infected, or whether it is a sexual partner (Allen et al, 2003; Bennetts et al, 1995; Gray et al, 2005; Orengo-Aguayo and Pérez-Jiménez, 2009; Sunderam et al, 2008). We suspect that acceptability of condom use may differ if it is husband who is suspected or known to be HIV infected compared to when it is the woman who is infected or suspected to be so. In addition, condom use is actualized within a dyadic context and involves a complex negotiation of risk and trust within the partnership (Montgomery et al, 2008; Woodsong and Alleman, 2008). The part of the question which dealt with HIV infection being suspected (not confirmed) implied that condom use would be decided when a partner suspects the other to be infected and partner being suspected to be infected possibly has not discussed about this possibility with the spouse. Many Prevention With Positives (PWP) or positive prevention (PP) programs promote an approach that encourages HIV infected persons to take the lead to prevent further transmission through openness between sexual partners (Gerbert et al, 2006; Gilliam and Straub, 2009). Individuals take pro-active efforts to know their own or their partner's HIV status and not to rely on suspicion. A limitation in the current study is the fact that our assessment of reported condom use within marriage was limited because we did not assess the relationship dynamics within which use or non-use occurred.

Finally, sampling in the MDICP was in three rural districts. To the extent that these women differ in outcomes or confounders from urban residents or women in other districts of the country, the findings from this study may not be representative of all women in the country.

Conclusion

In a study of ever-married women in rural Malawi, there was no difference in attitudes towards condom use or reported use within marriage between Muslim and Christian women. There were also no difference in attitudes between Catholics and most of the individual religious denominations. Presbyterians were less likely to accept condom use within marriage compared to Catholics when HIV was suspected or known to occur in a spouse. Based on our findings we conclude that both Christians and Muslims, and the other religions (except Presbyterians) are just as likely to perceive condoms as acceptable or not acceptable within marriage. We suggest future studies should explore the official doctrines (rules and regulations, principles, legal opinions) of religions as well as expressed teachings (what actually gets disseminated in congregations) regarding condom use.

CHAPTER 6

CONCLUSIONS AND SUMMARY OF FINDINGS

Summary of Findings

In this study conducted among women in Malawi, we set out to assess whether religion was associated with HIV infection or with condom acceptability within marriage. This was an attempt to gain insights into the HIV epidemic in this southern African country which has a national adult (15-49 years) HIV prevalence of about 12%.

With regard to Specific Aim 1 in which we assessed the strength of association between religion and HIV infection, we found that there was no difference in HIV prevalence among the different religions assessed. Catholics were at no greater or lesser risk than other religious denominations (e.g. Islam, Presbyterians, Seventh Day Adventists or Seventh Day Baptists) or all Protestants together; nor were Christians at greater or lesser risk than Muslims. The absence of difference in HIV prevalence was observed despite the fact that there were some differences in history of premarital sexual activity and condom use at sexual debut between study participants in some religions and Catholics. In general however, the differences were in only a minority of sexual behaviors and in just a few religions compared to Catholics. In the majority of religions, there were hardly any differences in sexual behaviors compared to Catholics, the reference group.

The lack of disparity in HIV infection among the different religions could result from any of the following reasons: the lack of sexual network boundaries among the religions resulting in

across religion HIV spread; similar or lack of differences in doctrines that are relevant to HIV spread, similar teachings and public health interventions among the religions; and having other similar overriding factors other than religion influencing HIV risk, such as cultural factors.

In Specific Aim 2, we assessed the strength of association between religion and condom use acceptability within marriage. Except when Presbyterians were compared to Catholics and only when it was stated that HIV was suspected or known to occur in a spouse, there were no difference in condom acceptability between Catholics and the other religions. There was also no difference in reported history of ever using a condom within the current or most recent marriage. Condom acceptability and sexual behaviors differed little among the religions. This finding is consistent with the similar HIV prevalence among the religions.

Even so, these findings were a surprise to us. The Catholic faith discourages modern contraception, including condoms (Hirsch, 2008). We were expecting that Catholics would be less likely to accept condom use, even within marriage, compared to other Christian denominations. This is because health-related information on HIV and AIDS that religions provide to their member and the teachings on morality (including on condom use) or specific doctrines related to sexuality could potentially affect behaviors that could influence vulnerability to HIV infection. However, religions do not have a monopoly in disseminating HIV-relevant messages. The popular media, health professionals, lay health workers and other community information channels disseminate HIV-relevant information that transcends religious boundaries. The constant flow of information from the secular media has potential to override or ameliorate the differences in any teachings (e.g. prohibition of condom use) of a particular religion (Bankole et al, 2007; Kalipeni and Kamlongera, 1996; National Statistical Office and ORC Macro, 2005; Trinitapoli, 2009).

Hirsch (2008) has described how contraceptive use is relatively common among Catholics in rural Mexico, despite exhortations to the contrary by the priests. She ascribes the dissonance between what the priests discourage and what the communities actually practice as a manifestation of the agility of communities to interpret the teaching of religions to suit their day to day realities. Other authors (e.g. Iannacone and Miles, 1990; Iannacone, 1994) have reported the tension that exists within religions in that while they (religions) may not wish to be so accommodative to multiple interpretations of their beliefs so as a maintain a distinct identity, they must also contend with the threat of too much rigidity to the point that they may drive some followers away.

The official HIV prevention messages from most of the religions is the same i.e. abstinence for unmarried persons and mutual monogamy in marriage. The promotion or discouragement of condom use within marriage differs. While some religions permit condom use for family planning within marriage, others do not. However, Trinitapoli (2009) has observed that the official message against condom use for the prevention of HIV that church ministers may convey from the pulpit may not always be consistent with what they promote when they meet individual church members in private. Such inconsistency where the message in the pulpit is conservative but less so in private individual counseling with church members may influence higher condom acceptability than would have otherwise been the case just based on official doctrines or messages disseminated at public forums.

Some researchers have also reported a more complex assessment of the relationship between Islam and modern contraceptive use (Iyer, 2002a, 2002b; Jeffrey and Jeffrey, 2002). They point out that both opponents and proponents of contraceptives within Islam have been able to provide theological arguments for their position. This has led Amin et al (1997) and Johnson-

Hanks (2006) to conclude that multiple interpretations of doctrines, principles and rules within religions are a strategic response to the social and political realities in different communities.

The fact that we found no difference in HIV infection prevalence (Aim 1 of the study) and again no differences in condom acceptability and use (in Aim 2) suggests that risk factors among women in different religions are largely similar or at least cancel each other out. However, an individual's HIV risk is also dependent on that of their their sexual partner(s) (Helleringer et al, 2007; Kohler et al, 2007). Unfortunately, we were unable to assess the HIV-relevant behaviors of sexual partners.

Although we found no difference in HIV prevalence, or sexual behaviors that may expose individuals to HIV infection, this study was not intended to assess the effect of religion compared to no religion in the prevention of HIV infection. Our sample contained too few people not affiliated with a religion to conduct such analysis. It is plausible to suggest that Malawi's HIV prevalence would have been higher had religion not been so distributed in the country, just as it is also equally plausible to suggest that religion may have had no effect in influencing the trajectory of HIV in the country.

Finally, while HIV prevalence among the religions was similar, the incidence of HIV infection may have differed. Prevalence is a function of both incidence and the average duration of infection. If the average duration of infection varied by religion because of systematic differences in access to treatment, nutritional status, or some other factor, then the incidences would also vary by religion. A cohort study would be needed to assess whether HIV incidence varies by religion.

Strengths of the study

Our study had several strengths. The MDHS was a nationally representative survey whose findings are likely to be representative of the rest of the country. In addition, while previous studies have only been able to assess the role of religion and sexual behaviors, we were able to also assess the effect of religion and actual HIV infection as the outcome. Reports of having engaged in extramarital or premarital sexual intercourse, which had been the focus of previous studies, may be of research and practical interest in their own right and for a diversity of motivations (religious, cultural or social); however perhaps the most important outcome of public health interest is HIV infection, which previous studies were not able to estimate. We were able to report on sexual behaviors as well as HIV infection.

Limitations of the present study

The data used in this study were collected via cross sectional surveys. An important limitation of cross sectional data is that we cannot assign causation between any two variables which may be associated. We are therefore unable to suggest that religion was causal to any sexual behaviors (e.g. Presbyterians being less likely to accept condoms within marriage compared to Catholics) or HIV infection. It is likely though that religious denominational affiliation precedes HIV infection. However, we also recognize that several authors have reported changes in religious behaviors of individuals following an HIV diagnosis (Cotton et al, 2006; Hall, 1998; Ironson et al 2006). In a study of Latino gay, bisexual and transgender individuals in the United States, García (2008) reported that many people had abandoned Catholicism to join other religions or spiritual groups that they perceived to be welcoming to their sexual orientation. It is possible that some of the study participants in our study may have

changed their religious affiliation to suit their own sexual behaviors or changed their religions following an HIV diagnosis prior to the current study. The extent to which people change their religions based on their behaviors in Malawi deserves further study.

Data to enable us to assess whether any change in an individual's religion was associated with HIV infection or sexual behaviors were not available. The question on religion was to get a response regarding the current religious affiliation; no effort was made to accommodate changes in religions. In reality however, some people change religions, or change religious beliefs in such a way that these changes may be associated with changes in sexual behaviors. The possibility that individuals may turn to religion following a life crisis (an adverse life event) such as learning that they are HIV infected or after widowhood, divorce or separation (Lessman et al, 2002) may not be ruled out either i.e. reverse causation (Maclure and Schneeweiss, 2001).

Another limitation was the fact that HIV bio-specimens were only evaluated with antibody-based HIV tests. A limitation of current antibody-based HIV tests is that they are only able to detect long standing HIV infection (of six weeks or more duration). As result, it was only possible to detect infections that were past the window period i.e. acute HIV infection (AHIVI) was not detected. Acute HIV infection is probably more likely to be associated with an individual's current religion while long standing infections (as measured by antibody-based tests) may not be so, especially if changes in religion may have occurred.

Much of the data used in this study, except HIV status, were obtained via self-reports. To the extent that survey participants misreported, either because of concern for social desirability, poor memory or ignorance, our findings may be biased. Social desirability has been defined as "the tendency of subjects to attribute to themselves in self-description, personality statements with socially desirable scale values and to reject those with socially undesirable scale values"

(Helmes and Holden, 2003; p. 1015). With regard to religion however, the MDHS questionnaire had the question on religion embedded within a section with less sensitive questions in order to isolate them away from questions which asked about sexual behaviors. We do not know to what extent survey participants were less or more influenced by this arrangement.

When individuals are asked to name a denominational affiliation they belong to, the possibilities include the religion they were born into, their current affiliation, a spouse's religion or the one that they are comfortable identifying themselves with. With the advent of charismatic Christian churches in Malawi, which do not claim monopoly of their followers, it is possible for an individual to belong to more than one religious denomination. The MDICP and the MDHS questionnaires had no provision to allow for such people who may belong to more than one religion.

The categorization of religious groups like "Other Christians" and Seventh Day Adventist/Seventh Day Baptists was likely problematic. The "Other Christians" groups comprised many small religious groups which may have shared some doctrinal beliefs and practices, but not necessarily so. These groups were grouped together largely because individually the numbers of their adherents within the sample was small. Seventh Day Adventist and Seventh Day Baptists were also combined together as one group simply for the fact that both observe Saturday as their main day of worship. These two religions may or may not share attributes that affect HIV vulnerability, such as doctrines, teachings, or HIV interventions

Our study was limited to only two religions or faiths: Christianity and Islam. Religions like Bahá'í, Hinduism, Buddhism, Rastafarianism, and others, were not included. Individuals within these religions had their religious affiliation recorded as "other religions." Furthermore, the combined total sample contribution of all of these "minority" religions was less than one

percent of either the MDICP or MDHS samples. These religions were therefore excluded from analysis. As the effect of these religions was not assessed, we cannot generalize our results to suggest that there would also be no differences in HIV infection or condom acceptability by religion among these religions compared to some referent.

The MDICP survey setting was three rural districts of Balaka, Mchinji and Rumphi. It is possible that the findings from this study may not be generalizable to urban settings of the country or even other rural areas.

Finally, the MDHS-2004/5 recruited and collected data only from non-institutionalized communities. However, the limited data that are available suggest that HIV infection prevalence may be higher in prisons compared to the 'general' population (Chimphambano et al, 2007). Reports have also suggested that individuals in correctional facilities have high prevalence of sexually transmitted infections and exhibit high risk behaviors (Dada et al, 2006; Simooya et al, 2001; Zachariah et al, 2002). So, while we believe that our findings are likely to be representative of the non-institutionalized population in Malawi, caution should be exercised in extrapolating these findings to institutional settings.

Future research directions

In order to complement the present findings which are based on cross sectional data, we suggest longitudinal studies which will explore the effect of religion, including changes in religious affiliation, and the effect of religiosity and spirituality on sexual behaviors as well as incident HIV infection. Although randomized controlled trials would have been preferred, these are not feasible as it is unethical, if not impossible, to randomize study participants to religions. However, it may be possible to randomize individuals or religious congregations to specific

public health interventions and assess their effect on behavior or HIV infection. Examples of these interventions include marital counseling and family 'enrichment' programs, comprehensive abstinence programs among unmarried people and assessing their effect on prevalence of extramarital sex, condom use and incident HIV infection.

Among the limitations of the Malawi Demographic and Health Survey data was the fact that a single question asking about religious denominational affiliation was asked. While religious affiliation was used as the exposure in our study, further insights in future studies are likely to be obtained if supplemental data on religiosity and spirituality. In the case of the MDICP, different questions were asked for Christians compared to Muslims.

According to Jagers and Smith (1996), Mattis (2000), and Zinnbauer et al, (1997) religiosity is defined as the degree to which individuals adhere to the prescribed beliefs and practices of an organized religion. Spirituality however refers to an individual's belief in the sacred and transcendent nature of life, a quest for goodness and the manifestation of these beliefs in a sense of connectedness with others (e.g., humans, spirits, and God). In the MDICP, there were some questions in religious behaviors. Without relevant information on the prescribed practices within the religions, a meaningful derivation of religiosity as a measure of an individual's commitment within their religions was not possible.

Future qualitative studies using in-depth key informant interviews, focus group discussions, and observations of communities with respect to their social interactions will be valuable in understanding the role of religion in HIV infection. In addition, a review of official denominational documents such as resolutions, doctrines and statements on HIV and AIDS, and sexuality and marriage will be critical in enhancing our understanding of religion and HIV infection in Malawi.

Public health singificance

The central role that religion plays in individual and communal life in Malawi provides opportunity for the consideration of HIV intervention programs cognizant of people's religious beliefs, attitudes and practices. Although there will be areas of agreement between public health measures and religions on how to stem the HIV epidemic, there will also be many areas of divergence of opinions and processes. While it would be naïve to think that religions will fundamentally change to protect public health, public efforts that fail to recognize the role of religion in people's lives are likely to be less effective than they would otherwise be.

From the findings of this study, it appears some religious groups are more likely to engage in premarital sex than others and some groups were less likely than others to use condoms in sexual intercourse with extramarital or premarital partners. The underlying mechanism may have to do with the teachings, or the social environments that either promote or discourage certain behaviors within the different religions. We suggest that religions which have displayed a higher tendency for extramarital sex may possibly benefit in promoting condom use among its members and/or establishing effective abstinence programs. We also believe that there is likely to be compensating mechanisms in operation that eventually lead to no difference in HIV infection among the religions. A religion in which premarital sex is relatively common may compensate with higher condom use.

APPENDICES

Appendix A: Malawi Demographic and Health Survey Questionnaire

MALAWI DEMOGRAPHIC AND HEALTH SURVEY
MALAWI GOVERNMENT - NATIONAL STATISTICAL OFFICE
WOMAN'S QUESTIONNAIRE

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

DISTRICT _____

CLUSTER NUMBER . . . . . [ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ]

URBAN/RURAL (URBAN=1, RURAL=2) . . . . . [ ]

LARGE CITY/SMALL CITY/TOWN/COUNTRYSIDE . . . . . [ ]
(LARGE CITY=1, SMALL CITY=2, TOWN=3, COUNTRYSIDE=4)

NAME AND LINE NUMBER OF WOMAN _____ [ ][ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
				MONTH [ ][ ]
				YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INT. CODE [ ][ ]
RESULT*	_____	_____	_____	RESULT [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE***: [3]

LANGUAGE OF INTERVIEW***: [ ]

NATIVE LANGUAGE OF RESPONDENT***: [ ]

WAS A TRANSLATOR USED? (YES=1, NO=2) [ ]

*** LANGUAGE CODES: 1 CHICHEWA 2 TUMBUKA 3 ENGLISH 4 OTHER _____(SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____ [ ][ ]	DATE _____ [ ][ ]	[ ][ ]	[ ][ ]

SECTION 1. RESPONDENT'S BACKGROUND

INFORMED CONSENT: INTRODUCTORY

Hello. My name is _____ and I am working with the National Statistical Office. The National Statistical Office, together with the Ministry of Health, is conducting a national survey about the health of women and children. Your household is one of the households that have been randomly selected out of all households in Malawi to be asked the questions in this survey. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services.The survey usually takes about 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2→ END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→105
104	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
105	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
107	Have you ever attended school?	YES . . . . . 1 NO 2	→111
108	What is the highest level of school you attended: primary, secondary, or higher?	PRIMARY . . . . . 1 SECONDARY . . . . . 2 HIGHER 3	
109	What is the highest (class/form/year) you completed at that level?	CLASS . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
110	CHECK 108: PRIMARY ☐ → SECONDARY OR HIGHER ☐ → 114		
111	Now I would like you to read this sentence to me. SHOW SENTENCES ON THE NEXT PAGE TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
112	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
113	CHECK 111: CODE '2', '3' OR '4' CIRCLED ☐ → CODE '1' OR '5' CIRCLED ☐ → 115		
114	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
115	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
116	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
117	What is your religion?	CATHOLIC . . . . . 01 CCAP . . . . . 02 ANGLICAN . . . . . 03 SEVENTH DAY ADVENT./BAPTIST . . . 04 OTHER CHRISTIAN . . . . . 05 MUSLIM . . . . . 06 NO RELIGION . . . . . 07 OTHER_____ 96 (SPECIFY)	
118	What is your tribe or ethnic group?	CHEWA . . . . . 01 TUMBUKA . . . . . 02 LOMWE . . . . . 03 TONGA . . . . . 04 YAO . . . . . 05 SENA . . . . . 06 NKONDE . . . . . 07 NGONI . . . . . 08 OTHER_____ 96 (SPECIFY)	

SENTENCES FOR LITERACY TEST (Q 111)1

CHICHEWA

Makolo amakonda ana awo.
Ulimi ndi khama.
Mwana akuwerenga bukhu.
Ana amalimbikila kusukulu.

TUMBUKA

Bapapi wakutemwa wana wawo.
Kulima ndi ntchito yinonono.
Mwana wakuwerenga bukhu.
Wana wakulimbikira kusukulu.

YAO

Anangolo akusyanonyela wanachewawo.
Kulima kukusoseka kulimbichila.
Mwanache akuwalanga buku.
Wanache akusyalimbichila sukulu.

ENGLISH

Parents love their children.
Farming is had work.
The child is reading a book.
Children work hard at school.

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . ☐☐ DAUGHTERS AT HOME . . . . . ☐☐	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . ☐☐ DAUGHTERS ELSEWHERE . ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . ☐☐ GIRLS DEAD . . . . . ☐☐	
208	SUM ANSWERS TO 203, 205, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
01	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (NEXT BIRTH)	DAYS . . . 1 MONTHS 2 YEARS . . 3	
02	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
03	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
04	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
05	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
06	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
07	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2

212 What name was given to your next baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)?
08	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 ☐☐	YES . . . . 1 NO 2
09	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 ☐☐	YES . . . . 1 NO 2
10	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 ☐☐	YES . . . . 1 NO 2
11	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 ☐☐	YES . . . . 1 NO 2
12	SING 1 MULT 2	BOY 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 ☐☐	YES . . . . 1 NO 2

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES . . . . . 1 NO 2

223 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME ☐↓ NUMBERS ARE DIFFERENT ☐→ (PROBE AND RECONCILE)

CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. ☐

FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. ☐

FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. ☐

FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. ☐

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 1999 OR LATER.
IF NONE, RECORD '0'. ☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 1999, ENTER 'B' IN THE MONTH OF BIRTH IN COLUMN 1 OF THE CALENDAR. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.) WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE.		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN COLUMN 1 OF CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS	
228	At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN . . . . . 1 LATER . . . . . 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 237
230	When did the last such pregnancy end?	MONTH . . . . . YEAR	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 1999 OR LATER → ↓ LAST PREGNANCY ENDED BEFORE JAN. 1999 →		→ 237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS	
233	Have you ever had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 237
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 1999. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any pregnancies that terminated before 1999 that did not result in a live birth?	YES . . . . . 1 NO 2	→ 237
236	When did the last such pregnancy that terminated before 1999 end?	MONTH . . . . . YEAR	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.

301	Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)?		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to 72 hours after sexual intercourse to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2

303	CHECK 302:	
	NOT A SINGLE "YES" (NEVER USED) ☐ ↓	AT LEAST ONE "YES" (EVER USED) ☐ → 307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 306
305	ENTER '0' IN COLUMN 1 OF CALENDAR IN EACH BLANK MONTH.		→ 329
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN . . . . . ☐☐	
308	CHECK 302 (01): WOMAN NOT STERILIZED ☐ ↓ WOMAN STERILIZED ☐ →		311A
309	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐ →		318
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 318
311 311A	Which method are you using? IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD ON LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F CONDOM . . . . . G FEMALE CONDOM . . . . . H PERIODIC ABSTINENCE . . . . . L WITHDRAWAL . . . . . M OTHER _____ X (SPECIFY)	→ 313 → 316A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
313	In what facility did the sterilization take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) IF BOTH CODE 'A' AND CODE 'B' ARE CIRCLED IN 311, ASK 313-317 ABOUT FEMALE STERILIZATION ONLY.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 FAMILY PLANNING CLINIC . . . . . 13 OTHER PUBLIC _____ 16 (SPECIFY) MISSION HOSPITAL . . . . . 21 HEALTH CENTER . . . . . 22 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . 31 PRIVATE DOCTOR'S OFFICE . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) BLM . . . . . 41 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
314	CHECK 311: CODE 'A' CIRCLED → Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? CODE 'A' NOT CIRCLED → Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
316	In what month and year was the sterilization performed?		
316A	In what month and year did you start using (CURRENT METHOD) continuously? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
316B	CHECK 316/316A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 316/316A → YES: GO BACK TO 316/316A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION). NO:		
317	CHECK 316/316A: YEAR IS 1999 OR LATER → ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING. ENTER METHOD SOURCE CODE IN COLUMN 2 OF CALENDAR IN MONTH STARTED USING. THEN CONTINUE WITH 318 YEAR IS 1998 OR EARLIER → ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND EACH MONTH BACK TO JANUARY 1999. THEN SKIP TO → 327		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
318	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 1999. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. **IN COLUMN 1**, ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: COLUMN 1: * When was the last time you used a method? Which method was that? * When did you start using that method? How long after the birth of (NAME)? * How long did you use the method then? **IN COLUMN 2**, ENTER METHOD SOURCE CODE IN FIRST MONTH OF EACH USE. ILLUSTRATIVE QUESTIONS: COLUMN 2: * Where did you obtain the method when you started using it? * Where did you get advice on how to use the method [for LAM, rhythm, or withdrawal] **IN COLUMN 3**, ENTER CODES FOR DISCONTINUATION NEXT TO LAST MONTH OF USE. NUMBER OF CODES IN COLUMN 3 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: COLUMN 3: * Why did you stop using the (METHOD)? * Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason? IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: * How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		
321	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 PERIODIC ABSTINENCE . . . . . 12 WITHDRAWAL . . . . . 13 OTHER METHOD 96	→ 329 → 331 → 328 → 325 → 331 → 331 → 331
322	You obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM CALENDAR) in (DATE). At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 324
323	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 324A
324	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
324A	Were you ever advised that this contraceptive method does not protect against AIDS or other sexually-transmitted diseases?	YES . . . . . 1 NO 2	
325	CHECK 322: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM CALENDAR) in (DATE), were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	→ 327
326	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
327	CHECK 311/311A: CIRCLE METHOD CODE:	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 PERIODIC ABSTINENCE . . . . . 12 WITHDRAWAL . . . . . 13 OTHER METHOD 96	→ 331 → 331 → 331 → 331 → 331
328	Where did you obtain (CURRENT METHOD) the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 FAMILY PLANNING CLINIC . . . . . 13 MOBILE CLINIC . . . . . 14 CBDA/FIELDWORKER . . . . . 15 OTHER PUBLIC _____ 16 (SPECIFY) MISSION HOSPITAL . . . . . 21 HEALTH CENTER . . . . . 22 MOBILE CLINIC . . . . . 23 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . 31 PHARMACY . . . . . 32 PRIVATE DOCTOR . . . . . 33 MOBILE CLINIC . . . . . 34 CBDA/FIELDWORKER . . . . . 35 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) BLM . . . . . 41 OTHER SOURCE SHOP . . . . . 51 FRIEND/RELATIVE . . . . . 53 OTHER _____ 96 (SPECIFY)	→ 331

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
329	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 331
330	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE(S)) Any other place? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B FAMILY PLANNING CLINIC . . . . . C MOBILE CLINIC . . . . . D CBDA/FIELDWORKER . . . . . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER . . . . . H MOBILE CLINIC . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . J PHARMACY . . . . . K PRIVATE DOCTOR . . . . . L MOBILE CLINIC . . . . . M CBDA/FIELDWORKER . . . . . N OTHER PRIVATE MEDICAL _____ O (SPECIFY) BLM . . . . . P OTHER SOURCE SHOP . . . . . Q CHURCH . . . . . R FRIEND/RELATIVE . . . . . S OTHER _____ X (SPECIFY)	
331	In the last 12 months, were you visited by a fieldworker who talked to you about family planning?	YES . . . . . 1 NO 2	
332	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
333	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4A. PREGNANCY, POSTNATAL CARE AND BREASTFEEDING

401	CHECK 224: ONE OR MORE BIRTHS IN 1999 OR LATER ☐ ↓ NO BIRTHS IN 1999 OR LATER ☐ → 487			
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1999 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)			
403	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER . . . ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER . . . ☐☐	SECOND-FROM-LAST BIRTH LINE NUMBER . . . ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN . . . . . 1 (SKIP TO 407) ← LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 407) ←	THEN . . . . . 1 (SKIP TO 423) ← LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 423) ←	THEN . . . . . 1 (SKIP TO 423) ← LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 423) ←
406	How much longer would you like to have waited?	MONTHS . 1 ☐☐ YEARS . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . 1 ☐☐ YEARS . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . 1 ☐☐ YEARS . 2 ☐☐ DON'T KNOW . . . 998
407	Did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR/CLINICAL OFFICER . . . . . A NURSE/MIDWIFE B PATIENT ATTNDT C OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . . D OTHER _____ X (SPECIFY) NO ONE . . . . . Y (SKIP TO 415) ←		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
407A	Where did you receive antenatal care for this pregnancy? Anywhere else?	HOME YOUR HOME . . . A OTHER HOME . . . B PUBLIC SECTOR GOVT. HOSPITAL C GOVT. HEALTH CENTER . . . . . D GOVT. HEALTH POST . . . . . E MOBILE CLINIC . . F OTHER PUBLIC _____ G (SPECIFY) MISSION HOSPITAL H HEALTH CENTER I PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . J MOBILE CLINIC . . K OTHER PRIVATE MED. _____ L (SPECIFY) TRAD. BIRTH ATTENDANT . . . . M OTHER _____ X (SPECIFY)	
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
409	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . ☐☐ DON'T KNOW 98		
410	CHECK 409: NUMBER OF TIMES RECEIVED ANTENATAL CARE	ONCE ☐ → (SKIP TO 412) MORE THAN ONCE OR DK ☐ →		
411	How many months pregnant were you the last time you received antenatal care?	MONTHS . . . ☐☐ DON'T KNOW 98		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
412	During this pregnancy, were any of the following done at least once?	YES NO Were you weighed? WEIGHT . . . 1 2 Was your height measured? HEIGHT . . . 1 2 Was your blood pressure measured? BP . . . . . 1 2 Did you give a urine sample? URINE . . . . . 1 2 Did you give a blood sample? BLOOD . . . 1 2 Was the fetal heartbeat checked? HEART . . . 1 2 Did someone examine your eyes? EYES 1 2		
412A	During any of the antenatal visits for the pregnancy, were you given any information or counseled about AIDS or the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
412B	Were you tested for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 413) DON'T KNOW 8		
412C	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2		
413	Were you told about the signs of pregnancy complications?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 414A) DON'T KNOW 8		
414	Were you told where to go if you had these complications?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
414A	During this pregnancy, did you experience:	YES NO High blood pressure? 1 2 Swelling of your feet? 1 2 Anemia? 1 2 Bleeding? 1 2		
414B	CHECK 414A: COMPLICATIONS IN PREGNANCY	IF ANY YES RESPONSE ALL NO RESPONSE (SKIP TO 415)		
414C	Did you seek advice or treatment for these problems?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 415)		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
414D	Where did you seek advice or treatment? IF SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Anywhere else? RECORD ALL PLACES MENTIONED.	HOME YOUR HOME . . . A OTHER HOME . . . B PUBLIC SECTOR GOVT. HOSPITAL C GOVT. HEALTH CENTER . . . . . D GOVT. HEALTH POST . . . . . E MOBILE CLINIC . . F OTHER PUBLIC _____ G (SPECIFY) MISSION HOSPITAL H HEALTH CENTER I PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . J MOBILE CLINIC . . K OTHER PRIVATE MED. _____ L (SPECIFY) TRAD. BIRTH ATTENDANT . . . . M OTHER _____ X (SPECIFY)		
415	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 416A) ← DON'T KNOW 8		
416	During this pregnancy, how many times did you get this injection?	TIMES . . . . . ☐ DON'T KNOW . . . 8		
416A	Before this pregnancy, were you given an injection in the arm to prevent you from getting tetanus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
417	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLETS.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 419) ← DON'T KNOW 8		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
418	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	NUMBER OF DAYS ☐☐☐ DON'T KNOW . . . 998		
419	During this pregnancy, did you have difficulty with your vision during the daylight?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
420	During this pregnancy, did you have difficulty with your vision at night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
421	During this pregnancy, did you take any drugs to prevent you from getting malaria? Not considered here are instances where you took the drug because you had malaria.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 423) ← DON'T KNOW 8		
422	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	SP/FANSIDAR . . . 1 DON'T KNOW . . . . . 8 OTHER _____ 6 (SPECIFY)		
422A	CHECK 422: DRUGS TAKEN FOR MALARIA PREVENTION	CODE '1' CIRCLED ☐ ↓ CODE '1' NOT CIRCLED ☐ (SKIP TO 423) →		
422B	How many times did you take SP/ Fansidar during this pregnancy?	TIMES . . . . . ☐☐		
422C	CHECK 407: ANTENATAL CARE RECEIVED DURING THIS PREGNANCY?	CODE 'A', 'B' OR 'C' CIRCLED ☐ ↓ OTHER ☐ (SKIP TO 423) →		
422D	Did you get the SP/Fansidar during an antenatal visit, during another visit to a health facility or from some other source?	ANTENATAL VISIT . . 1 ANOTHER FACILITY VISIT . . . . . 2 OTHER SOURCE _____ 6 (SPECIFY) (SKIP TO 423) ←		
422E	Did you take the SP/Fansidar under direct observation by the health worker each time, or did you take it at home?	DIRECT OBSERVATION . . . 1 AT HOME 2		

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
423	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8
425	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	GRAMS FROM CARD 1 [ ][ ][ ][ ] GRAMS FROM RECALL 2 [ ][ ][ ][ ] DON'T KNOW 99998	GRAMS FROM CARD 1 [ ][ ][ ][ ] GRAMS FROM RECALL 2 [ ][ ][ ][ ] DON'T KNOW 99998	GRAMS FROM CARD 1 [ ][ ][ ][ ] GRAMS FROM RECALL 2 [ ][ ][ ][ ] DON'T KNOW 99998
426	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY	HEALTH PROFESSIONAL DOCTOR/CLINICAL OFFICER .... A NURSE/MIDWIFE B PATIENT ATTNDT C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ... D RELATIVE/FRIEND E OTHER________ X (SPECIFY) NO ONE .... Y	HEALTH PROFESSIONAL DOCTOR/CLINICAL OFFICER .... A NURSE/MIDWIFE B PATIENT ATTNDT C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ... D RELATIVE/FRIEND E OTHER________ X (SPECIFY) NO ONE .... Y	HEALTH PROFESSIONAL DOCTOR/CLINICAL OFFICER .... A NURSE/MIDWIFE B PATIENT ATTNDT C OTHER PERSON TRADITIONAL BIRTH ATTENDANT ... D RELATIVE/FRIEND E OTHER________ X (SPECIFY) NO ONE .... Y
427	Where did you give birth to (NAME)? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. ________ (NAME OF PLACE)	HOME YOUR HOME ... 11 (SKIP TO 429) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH POST .... 23 OTHER PUBLIC ________ 26 (SPECIFY) MISSION HOSPITAL ..... 31 HEALTH CENTER . 32 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC .... 41 OTHER PRIVATE MED.________ 46 (SPECIFY) TRAD. BIRTH ATTENDANT .... 51 OTHER________ 96 (SPECIFY) ←	HOME YOUR HOME ... 11 (SKIP TO 429) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH POST .... 23 OTHER PUBLIC ________ 26 (SPECIFY) MISSION HOSPITAL ..... 31 HEALTH CENTER . 32 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC .... 41 OTHER PRIVATE MED.________ 46 (SPECIFY) TRAD. BIRTH ATTENDANT .... 51 OTHER________ 96 (SPECIFY) ←	HOME YOUR HOME ... 11 (SKIP TO 429) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH POST .... 23 OTHER PUBLIC ________ 26 (SPECIFY) MISSION HOSPITAL ..... 31 HEALTH CENTER . 32 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC .... 41 OTHER PRIVATE MED.________ 46 (SPECIFY) TRAD. BIRTH ATTENDANT .... 51 OTHER________ 96 (SPECIFY) ←

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
		(SKIP TO 429) ←	(SKIP TO 429) ←	(SKIP TO 429) ←
428	Was (NAME) delivered by caesarean section?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
429	After (NAME) was born, did a health professional or a traditional birth attendant check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432A)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
430	How many days or weeks after delivery did the first check take place? RECORD '00' DAYS IF SAME DAY.	DAYS AFTER DEL 1 ☐☐ WEEKS AFTER DEL 2 ☐☐ DON'T KNOW . . . 998		
431	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROFESSIONAL DOCTOR/CLINICAL OFFICER . . . . . 11 NURSE/MIDWIFE . . . 12 PATIENT ATTNDT... 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT . . . 21 OTHER_____ 96 (SPECIFY)		
432	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) MISSION HOSPITAL . . . . . 31 HEALTH CENTEF . 32 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED._____ 46 (SPECIFY) TRAD. BIRTH ATTENDANT . . . . 51 OTHER_____ 96 (SPECIFY)		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
432A	After this birth, did you experience a problem such as: Heavy bleeding? High blood pressure? Stroke/convulsions? Infection/fever? Leakage of urine or stool from your vagina? Post-partum depression/blues?	YES NO DON'T KNOW 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8		
433	In the first two months after delivery, did you receive a vitamin A dose like this? SHOW AMPULE/CAPSULE.	YES . . . . . 1 NO 2		
434	Has your period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 436) NO . . . . . 2 (SKIP TO 437)		
435	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 439)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 439)
436	For how many months after the birth of (NAME) did you <u>not</u> have a period?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
437	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 439)		
438	Have you resumed sexual relations since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 440)		
439	For how many months after the birth of (NAME) did you <u>not</u> have sexual relations?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
440	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 447)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 447)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 447)
441	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . 000 HOURS . 1 ☐☐ DAYS . . . 2 ☐☐	IMMEDIATELY . . . 000 HOURS . 1 ☐☐ DAYS . . . 2 ☐☐	IMMEDIATELY . . . 000 HOURS . 1 ☐☐ DAYS . . . 2 ☐☐
442	In the first three days after delivery, before your milk began flowing regularly, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 444)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 444)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 444)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
443	What was (NAME) given to drink before your milk began flowing regularly? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) . A PLAIN WATER . . . B SUGAR OR GLUCOSE WATER . . . C GRIPE WATER . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)	MILK (OTHER THAN BREAST MILK) . A PLAIN WATER . . . B SUGAR OR GLUCOSE WATER . C GRIPE WATER . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)	MILK (OTHER THAN BREAST MILK) . A PLAIN WATER . . . B SUGAR OR GLUCOSE WATER . C GRIPE WATER . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)
444	CHECK 404: IS CHILD LIVING?	LIVING → DEAD → (SKIP TO 446)	LIVING → DEAD → (SKIP TO 446)	LIVING → DEAD → (SKIP TO 446)
445	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 448) NO 2	YES . . . . . 1 (SKIP TO 448) NO 2	YES . . . . . 1 (SKIP TO 448) NO 2
446	For how many months did you breastfeed (NAME)?	MONTHS . . . ☐☐ DON'T KNOW . . . 98	MONTHS . . . ☐☐ DON'T KNOW . . . 98	MONTHS . . . ☐☐ DON'T KNOW . . . 98
447	CHECK 404: IS CHILD LIVING?	LIVING → (SKIP TO 450) DEAD → (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454)	LIVING → (SKIP TO 450) DEAD → (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454)	LIVING → (SKIP TO 450) DEAD → (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 454)
448	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS . ☐☐	NUMBER OF NIGHTTIME FEEDINGS . ☐☐	NUMBER OF NIGHTTIME FEEDINGS . ☐☐
449	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS . ☐☐	NUMBER OF DAYLIGHT FEEDINGS . ☐☐	NUMBER OF DAYLIGHT FEEDINGS . ☐☐
450	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
451	Was sugar added to any of the foods or liquids (NAME) ate yesterday?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
452	How many times did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8
453		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 454.

454 ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1999 OR LATER.
ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.
(IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
455	LINE NUMBER FROM 212	LINE NUMBER	LINE NUMBER	LINE NUMBER . . . . .
456	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐ (GO TO 456 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 486)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 456 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 486)	NAME _____ LIVING ☐ DEAD ☐ (GO TO 456 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 486)
457	Did (NAME) receive a vitamin A dose like this during the last 6 months? SHOW CAPSULE	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
458	Do you have a card or booklet where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 460) YES, NOT SEEN . . . . . 2 (SKIP TO 462) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 460) YES, NOT SEEN . . . . . 2 (SKIP TO 462) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 460) YES, NOT SEEN . . . . . 2 (SKIP TO 462) NO CARD 3
459	Did you ever have a vaccination card for (NAME)?	YES . . . . . 1 (SKIP TO 462) NO 2	YES . . . . . 1 (SKIP TO 462) NO 2	YES . . . . . 1 (SKIP TO 462) NO 2

460 (1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD OR BOOKLET.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.

	LAST BIRTH DAY	LAST BIRTH MONTH	LAST BIRTH YEAR	NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MONTH	NEXT-TO-LAST BIRTH YEAR	SECOND-FROM-LAST BIRTH DAY	SECOND-FROM-LAST BIRTH MONTH	SECOND-FROM-LAST BIRTH YEAR
BCG				BCG			BCG		
POLIO 0 (BEFORE 14 DAYS OLD)				P0			P0		
POLIO 1 (AT 6 WEEKS OLD OR LATER)				P1			P1		
POLIO 2 (1 MONTH AFTER 1ST DOSE)				P2			P2		
POLIO 3 (1 MONTH AFTER 2ND DOSE)				P3			P3		
DPT 1 (AT 6 WEEKS OLD OR LATER)				D1			D1		
DPT 2				D2			D2		
DPT 3				D3			D3		
MEASLES				MEA			MEA		
VITAMIN A (MOST RECENT)				VIT A			VIT A		

		LAST BIRTH NAME ________________	NEXT-TO-LAST BIRTH NAME ________________	SECOND-FROM-LAST BIRTH NAME ________________
461	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, AND/OR MEASLES VACCINE(S).	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO . . . . 2 (SKIP TO 464) DON'T KNOW 8	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO . . . . 2 (SKIP TO 464) DON'T KNOW 8	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO . . . . 2 (SKIP TO 464) DON'T KNOW 8
462	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES . . . . 1 NO . . . . 2 (SKIP TO 466) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 466) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 466) DON'T KNOW 8
463	Please tell me if (NAME) received any of the following vaccinations:			
463A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
463B	Polio vaccine, that is, drops in the mouth?	YES . . . . 1 NO . . . . 2 (SKIP TO 463E) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 463E) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 463E) DON'T KNOW 8
463C	When was the first polio vaccine received, just after birth or later?	JUST AFTER BIRTH 1 LATER 2	JUST AFTER BIRTH 1 LATER 2	JUST AFTER BIRTH 1 LATER 2
463D	How many times was the polio vaccine received?	NUMBER OF TIMES . . . . . . ☐	NUMBER OF TIMES . . . . . . ☐	NUMBER OF TIMES . . . . . . ☐
463E	A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?	YES . . . . 1 NO . . . . 2 (SKIP TO 463G) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 463G) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 463G) DON'T KNOW 8
463F	How many times?	NUMBER OF TIMES . . . . . . ☐	NUMBER OF TIMES . . . . . . ☐	NUMBER OF TIMES . . . . . . ☐
463G	An injection to prevent measles?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
464	Were any of the vaccinations (NAME) received during the last two years given as part of a national immunization day campaign?	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW 8

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
466	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . 1 NO . . . . 2 DON'T KNOW . . . . 8 (SKIP TO 467)	YES . . . . 1 NO . . . . 2 DON'T KNOW . . . . 8 (SKIP TO 467)	YES . . . . 1 NO . . . . 2 DON'T KNOW . . . . 8 (SKIP TO 467)

466A I would like to know what things were done in response to (NAME's) fever.

What was done first?

What was done after that?

NOTE: CIRCLE ONE CODE IN EACH COLUMN FOR THE FIRST FOUR ACTIONS.

EACH COLUMN SHOULD HAVE ONLY ONE CODE CIRCLED.

ALL COLUMNS SHOULD CONTAIN AN ACTION.

	LAST BIRTH 1st	2nd	3rd	4th	NEXT-TO-LAST 1st	2nd	3rd	4th	SECOND-FROM-LAST 1st	2nd	3rd	4th
GAVE MEDICINE FROM HOME	01	01	01	01	01	01	01	01	01	01	01	01
GAVE MEDICINE FROM A PHARMACIST /SHOPKEEPER (WITHOUT A PRESCRIP-TION)	02	02	02	02	02	02	02	02	02	02	02	02
TAKEN TO A GOVERN-MENT-RUN HEALTH CENTER	03	03	03	03	03	03	03	03	03	03	03	03
TAKEN TO A MISSION HEALTH CENTER	04	04	04	04	04	04	04	04	04	04	04	04
TAKEN TO A PRIVATE HEALTH CENTER	05	05	05	05	05	05	05	05	05	05	05	05
CONSULTED TRADITIONAL HEALER	06	06	06	06	06	06	06	06	06	06	06	06
CONSULTED COMMUNITY HEALTH WORKER	07	07	07	07	07	07	07	07	07	07	07	07
GAVE TEPID SPONGING	08	08	08	08	08	08	08	08	08	08	08	08
GAVE HERBS AT HOME	09	09	09	09	09	09	09	09	09	09	09	09
OTHER	10	10	10	10	10	10	10	10	10	10	10	10
DID NOTHING (ELSE)	11	11	11	11	11	11	11	11	11	11	11	11
DON'T KNOW	12	12	12	12	12	12	12	12	12	12	12	12

	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
466B	CHECK 466A: CODE "01" OR CODE "02" CIRCLED IN ANY COLUMN ☐ ↓ / CODE "01" OR "02" NOT CIRCLED ☐ (SKIP TO 466E)	CHECK 466A: CODE "01" OR CODE "02" CIRCLED IN ANY COLUMN ☐ ↓ / CODE "01" OR "02" NOT CIRCLED ☐ (SKIP TO 466E)	CHECK 466A: CODE "01" OR CODE "02" CIRCLED IN ANY COLUMN ☐ ↓ / CODE "01" OR "02" NOT CIRCLED ☐ (SKIP TO 466E)

		LAST BIRTH NAME ________________	NEXT-TO-LAST BIRTH NAME ________________	SECOND-FROM-LAST BIRTH NAME ________________
466C	Which medicines were given to (NAME)? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466E	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466E	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466E
466D	IF CHILD WITH FEVER TOOK AN ANTI-MALARIAL MEDICINE: How long after the fever started did (NAME) start taking the medicine?	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3
466E		CHECK 466A: CODE "03" CIRCLED IN ANY COLUMN ☐ CODE "03" NOT CIRCLED ☐ (SKIP TO 466J)	CHECK 466A: CODE "03" CIRCLED IN ANY COLUMN ☐ CODE "03" NOT CIRCLED ☐ (SKIP TO 466J)	CHECK 466A: CODE "03" CIRCLED IN ANY COLUMN ☐ CODE "03" NOT CIRCLED ☐ (SKIP TO 466J)
466F	How long after you noticed the fever was (NAME) taken to a government-run health center?	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3
466G	Were any drugs or prescriptions for drugs given at the government-run health center for (NAME)?	YES 1 NO 2 (SKIP TO 466J) DON'T KNOW 8	YES 1 NO 2 (SKIP TO 466J) DON'T KNOW 8	YES 1 NO 2 (SKIP TO 466J) DON'T KNOW 8

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
466H	Which medicines were given to (NAME)? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466J	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466J	ANTI-MALARIAL SP/FANSIDAR......... A CHLOROQUINE...... B AMODIAQUINE........ C QUININE................ D ARTESUNATE......... E OTHER DRUGS ASPIRIN .... F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER___________ X (SPECIFY) DON'T KNOW............ Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466J
466I	IF CHILD WITH FEVER TOOK AN ANTI-MALARIAL MEDICINE: How long after the fever started did (NAME) start taking the medicine?	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY AFTER THE FEVER ...... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3
466J		CHECK 466A: CODE "04" CIRCLED IN ANY COLUMN [ ] CODE "04" NOT CIRCLED [ ] (SKIP TO 466O)	CHECK 466A: CODE "04" CIRCLED IN ANY COLUMN [ ] CODE "04" NOT CIRCLED [ ] (SKIP TO 466O)	CHECK 466A: CODE "04" CIRCLED IN ANY COLUMN [ ] CODE "04" NOT CIRCLED [ ] (SKIP TO 466O)
466K	How long after you noticed the fever was (NAME) taken to a mission health center?	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY .... 0 NEXT DAY .... 1 2 DAYS AFTER THE FEVER ...... 2 3 OR MORE DAYS AFTER THE FEVER 3
466L	Were any drugs or prescriptions for drugs given at the mission health center for (NAME)?	YES 1 NO 2 (SKIP TO 466O) DON'T KNOW 8	YES 1 NO 2 (SKIP TO 466O) DON'T KNOW 8	YES 1 NO 2 (SKIP TO 466O) DON'T KNOW 8

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
466M	Which medicines were given to (NAME)? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER__________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466O	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER__________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466O	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER__________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466O
466N	IF CHILD WITH FEVER TOOK AN ANTI-MALARIAL MEDICINE: How long after the fever started did (NAME) start taking the medicine?	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3
466O		CHECK 466A: CODE "05" CIRCLED IN ANY COLUMN ☐ CODE "05" NOT CIRCLED ☐ (SKIP TO 466T)	CHECK 466A: CODE "05" CIRCLED IN ANY COLUMN ☐ CODE "05" NOT CIRCLED ☐ (SKIP TO 466T)	CHECK 466A: CODE "05" CIRCLED IN ANY COLUMN ☐ CODE "05" NOT CIRCLED ☐ (SKIP TO 466T)
466P	How long after you noticed the fever was (NAME) taken to a private health center?	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3
466Q	Were any drugs or prescriptions for drugs given at the private health center for (NAME)?	YES . . . . 1 NO . . . . 2 (SKIP TO 466T) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 466T) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 466T) DON'T KNOW 8

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
466R	Which medicines were given to (NAME)? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL SP/FANSIDAR . . . A CHLOROQUINE . . . B AMODIAQUINE . . . C QUININE . . . . D ARTESUNATE . . . . . . E OTHER DRUGS ASPIRIN . . . . F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER________ X (SPECIFY) DON'T KNOW . . . . Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466T	ANTI-MALARIAL SP/FANSIDAR . . . A CHLOROQUINE . . . B AMODIAQUINE . . . C QUININE . . . . D ARTESUNATE . . . . . . E OTHER DRUGS ASPIRIN . . . . F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER________ X (SPECIFY) DON'T KNOW . . . . Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466T	ANTI-MALARIAL SP/FANSIDAR . . . A CHLOROQUINE . . . B AMODIAQUINE . . . C QUININE . . . . D ARTESUNATE . . . . . . E OTHER DRUGS ASPIRIN . . . . F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL ... G OTHER________ X (SPECIFY) DON'T KNOW . . . . Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 466T
466S	IF CHILD WITH FEVER TOOK AN ANTI-MALARIAL MEDICINE: How long after the fever started did (NAME) start taking the medicine?	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3
466T		CHECK 466A: CODE "07" CIRCLED IN ANY COLUMN ☐ CODE "07" NOT CIRCLED ☐ (SKIP TO 467)	CHECK 466A: CODE "07" CIRCLED IN ANY COLUMN ☐ CODE "07" NOT CIRCLED ☐ (SKIP TO 467)	CHECK 466A: CODE "07" CIRCLED IN ANY COLUMN ☐ CODE "07" NOT CIRCLED ☐ (SKIP TO 467)
466U	How long after you noticed the fever did (NAME) see the community health worker?	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3
466V	What did the community health worker do?	GAVE MEDICINE . . . 1 RECOMMENDED PURCHASE OF MEDICINE . . . . . . 2 REFERRED TO HEALTH CENTER/ DOCTOR . . . . 3 OTHER ________ 4 SPECIFY (SKIP TO 467)	GAVE MEDICINE . . . 1 RECOMMENDED PURCHASE OF MEDICINE . . . . . . 2 REFERRED TO HEALTH CENTER/ DOCTOR . . . . 3 OTHER ________ 4 SPECIFY (SKIP TO 467)	GAVE MEDICINE . . . 1 RECOMMENDED PURCHASE OF MEDICINE . . . . . . 2 REFERRED TO HEALTH CENTER/ DOCTOR . . . . 3 OTHER ________ 4 SPECIFY (SKIP TO 467)

		LAST BIRTH NAME ________________	NEXT-TO-LAST BIRTH NAME ________________	SECOND-FROM-LAST BIRTH NAME ________________
466W	Which medicines were given to (NAME)? RECORD ALL MENTIONED. ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER___________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 467	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER___________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 467	ANTI-MALARIAL SP/FANSIDAR……… A CHLOROQUINE…… B AMODIAQUINE…….. C QUININE……………. D ARTESUNATE……… E OTHER DRUGS ASPIRIN ……………. F IBUPROFEN/ ACETAMINOPHEN/ PANADOL/ PARACETAMOL … G OTHER___________ X (SPECIFY) DON'T KNOW………… Z IF NO ANTI-MALARIAL CIRCLED, SKIP TO 467
466X	IF CHILD WITH FEVER TOOK AN ANTI-MALARIAL MEDICINE: How long after the fever started did (NAME) start taking the medicine?	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3	SAME DAY . . . . 0 NEXT DAY AFTER THE FEVER . . . . . . 1 2 DAYS AFTER THE FEVER . . . . . . 2 3 OR MORE DAYS AFTER THE FEVER 3
467	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . 1 NO . . . . 2 (SKIP TO 472) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 472) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 472) DON'T KNOW 8
468	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
470	Did you seek advice or treatment for the cough?	YES . . . . 1 NO . . . . 2 (SKIP TO 472)	YES . . . . 1 NO . . . . 2 (SKIP TO 472)	YES . . . . 1 NO . . . . 2 (SKIP TO 472)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
471	Where did you seek advice or treatment? Anywhere else? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)
472	Has (NAME) been ill with convulsions at any time during the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8
472A	Did you seek advice or treatment for the convulsions?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 475) ← DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
472B	Where did you seek advice or treatment? Anywhere else? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)
472C	How long after the convulsions started was (NAME) taken for treatment?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER CONVULSIONS . 2 THREE OR MORE DAYS AFTER THE CONVULSIONS . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER THE FEVER . . . . . 2 THREE OR MORE DAYS AFTER THE FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER THE FEVER . . . . . 2 THREE OR MORE DAYS AFTER THE FEVER . . . . . 3 DON'T KNOW 8
475	Has (NAME) had diarrhea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 483) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 483) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 483) ← DON'T KNOW 8
476	Now I would like to know how much (NAME) was offered to drink during the diarrhea. Was he/she offered less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she offered much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8

		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
477	When (NAME) had diarrhea, was he/she offered less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she offered much less than usual to eat or somewhat less?	MUCH LESS . . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
478	Was he/she given fluid to drink made from a special packet called THANZI-ORS?	YES NO DK GAVE THANZI … 1 2 8	YES NO DK GAVE THANZI … 1 2 8	YES NO DK GAVE THANZI … 1 2 8
479	Was anything (else) given to treat the diarrhea?	YES . . . . 1 NO . . . . 2 (SKIP TO 481) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 481) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 481) DON'T KNOW 8
480	What was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP . . . A INJECTION . . . . B (IV) INTRAVENOUS . C HOME REMEDIES/ HERBAL MEDICINES . . . . . . D OTHER ________ X (SPECIFY)	PILL OR SYRUP . . . A INJECTION . . . . B (IV) INTRAVENOUS . C HOME REMEDIES/ HERBAL MEDICINES . . . . . . D OTHER ________ X (SPECIFY)	PILL OR SYRUP . . . A INJECTION . . . . B (IV) INTRAVENOUS . C HOME REMEDIES/ HERBAL MEDICINES . . . . . . D OTHER ________ X (SPECIFY)
481	Did you seek advice or treatment for the diarrhea?	YES . . . . 1 NO . . . . 2 (SKIP TO 483)	YES . . . . 1 NO . . . . 2 (SKIP TO 483)	YES . . . . 1 NO . . . . 2 (SKIP TO 483)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
482	Where did you seek advice or treatment? IF SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Anywhere else? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT HOSPITAL A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL . A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER H MOBILE CLINIC . I PRIVATE SECTOR PVT HOSPITAL/ CLINIC . . . . . J PHARMACY . . . K PVT DOCTOR . . . L MOBILE CLINIC . M FIELDWORKER . N OTHER PRIVATE MED. _____ O (SPECIFY) OTHER SOURCE SHOP . . . . . P TRAD. PRACTITIONER Q OTHER _____ X (SPECIFY)
483		GO BACK TO 456 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 486.	GO BACK TO 456 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 486.	GO BACK TO 456 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 486.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
486	CHECK 478, ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET (THANZI) ☐↓ ANY CHILD RECEIVED FLUID FROM ORS PACKET (THANZI) ☐→		491
487	Have you ever heard of a special product called THANZI-ORS you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
491	CHECK 215 AND 218: HAS AT LEAST ONE CHILD BORN IN 2001 OR LATER AND LIVING WITH HER ☐↓ DOES NOT HAVE ANY CHILDREN BORN IN 2001 OR LATER AND LIVING WITH HER ☐→ RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE TO 492) _____ (NAME)		494

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
492	Now I would like to ask you about liquids (NAME FROM Q. 491) drank yesterday. In total, how many <u>times</u> yesterday during the day or at night did (NAME FROM Q. 491) drink (ITEM)?	NUMBER OF TIMES	
a	Plain water?	a ☐	
b	Commercially produced infant formula?	b ☐	
c	Any other milk such as tinned, powdered, or fresh animal milk?	c ☐	
d	Fruit juice?	d ☐	
e	Any other liquids?	e ☐	
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		
493	Now I would like to ask you about the types of foods (NAME FROM Q. 491) ate yesterday. In total, how many <u>times</u> yesterday during the day or at night did (NAME FROM Q. 491) eat (ITEM)?	NUMBER OF TIMES	
a	Bread, scone, maize meal (ngaiwa), maize flour (ufawoyera), millet, rice, sorghum, or any other food made from grains?	a ☐	
b	Pumpkin, red or yellow yams or squash, carrots, or yellow/orange sweet potatoes?	b ☐	
c	Any other food made from roots or tubers, for example cocoyams, irish potatoes, white sweet potatoes, white yams, cassava, or other local roots or tubers?	c ☐	
d	Any dark green leafy vegetables such as amaranth, cassava, pumpkin, or sweet potato leaves, chinese cabbage, greens, kale, or other dark green leafy vegetables?	d ☐	
e	Mango or papaya?	e ☐	
f	Any other fruits and vegetables [for example, bananas, apples, green beans, avocados, tomatoes]?	f ☐	
g	Meat, poultry, fish, shellfish, insects, rodents, or eggs?	g ☐	
h	Any food made from legumes [for example, beans, soybeans, groundnuts, lentils, pigeon peas, or cowpeas]?	h ☐	
i	Cheese, milk or yoghurt?	i ☐	
j	Any food made with oil, fat, margarine or butter?	j ☐	
k.	Any other foods?	k ☐	
	IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW, RECORD '8'.		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
494	Now I would like to ask you some questions about medical care for you yourself. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROB-LEM / NOT A BIG PROB-LEM	
	Knowing where to go.	WHERE TO GO 1 2	
	Getting permission to go.	PERMISSION TO GO . . . 1 2	
	Getting money needed for treatment.	GETTING MONEY 1 2	
	The time required to cover the distance to the health facility.	DISTANCE 1 2	
	The availability of means of transport.	MEANS OF TRANSPORT . 1 2	
	The cost of transport.	COST OF TRANSPOR- . . . 1 2	
	Not wanting to go alone.	GO ALONE 1 2	
	Concern that there may not be a female health provider.	NO FEMALE PROV. . . . 1 2	
494A	**CHECK 432A:** **DID NOT** REPORT LEAKAGE OF URINE OR STOOL AFTER THIS PREGNANCY, OR WAS NOT ASKED QUESTION ☐ ↓ REPORTED EXPERIENCING LEAKAGE OF URINE OR STOOL AFTER THIS PREGNANCY ☐ →		495
494B	Sometimes a woman can have a problem, usually after a difficult childbirth, such that she experiences a leakage of urine or stool from her vagina. Have you ever experienced this problem?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
495	In the past 12 months, did you receive any injections?	YES . . . . . 1 NO . . . . . 2 →	501
495A	In the past 12 months, how many injections did you receive?	NUMBER . . . . . ☐☐	
495B	Who gave you the injection the last time you got it?	DOCTOR . . . . . 1 NURSE . . . . . 2 PHARMACIST . . . . . 3 DRUG VENDOR . . . . . 4 SELF-ADMINISTERED . . . . . 5 FRIEND OR FAMILY . . . . . 6 LOCAL INJECTION DOCTOR . . . . . 7 OTHER _____ 9 SPECIFY	
496	Do you currently smoke cigarettes or use tobacco? IF YES: What type of tobacco do you use? RECORD ALL TYPES MENTIONED.	YES, CIGARETTES . . . . . A YES, PIPE . . . . . B YES, OTHER TOBACCO . . . . . C YES, CHEWING TOBACCO . . . . . D YES, SNUFF . . . . . E NO . . . . . Y	
497	Do you drink alcohol?	YES . . . . . 1 NO . . . . . 2 →	501
498	How often do you get drunk: very often, only sometimes, or never?	VERY OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	

SECTION 5. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Are you currently married or living with a man?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 505
502	Have you ever been married or lived with a man?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 504 → 510
503	ENTER '0' IN COLUMN 4 OF CALENDAR IN THE MONTH OF INTERVIEW, AND IN EACH MONTH BACK TO JANUARY 1999		→ 514
504	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 510
504A	Who did most of your late husband's property go to?	RESPONDENT . . . . . 1 OTHER WIFE . . . . . 2 SPOUSE'S CHILDREN . . . . . 3 SPOUSE'S FAMILY . . . . . 4 OTHER _____ 5 (SPECIFY) NO PROPERTY 6	→ 510
504B	Did you receive any of your late husband's assets or valuables?	YES . . . . . 1 NO 2	→ 510
505	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
506	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
507	Does your husband/partner have any other wives besides yourself?	YES . . . . . 1 NO 2	→ 510
508	How many other wives does he have?	NUMBER . . . . . [ ][ ] DON'T KNOW 98	→ 510
509	Are you the first, second, … wife?	RANK . . . . . [ ][ ]	
510	Have you been married or lived with a man only once, or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
511	CHECK 510: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now we will talk about your first husband/partner. In what month and year did you start living with him?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→ 513
512	How old were you when you started living with him?	AGE . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
513	DETERMINE MONTHS MARRIED OR LIVING WITH A MAN SINCE JANUARY 1999. ENTER 'X' IN COLUMN 4 OF CALENDAR FOR EACH MONTH MARRIED OR LIVING WITH A MAN, AND ENTER 'O' FOR EACH MONTH NOT MARRIED/NOT LIVING WITH A MAN, SINCE JANUARY 1999. FOR WOMEN WITH MORE THAN ONE UNION: PROBE FOR DATE WHEN CURRENT UNION STARTED AND, IF APPROPRIATE, FOR STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS. FOR WOMEN NOT CURRENTLY IN UNION: PROBE FOR DATE WHEN LAST UNION STARTED AND FOR TERMINATION DATE AND, IF APPROPRIATE, FOR THE STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS.		
514	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER . . . . . 00 AGE IN YEARS . . . . . [ ][ ] FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	→ 524
514A	CHECK 106: 15-24 YEARS OLD [ ] ↓ 25-49 YEARS OLD [ ] →		→ 515
514B	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	
514C	How old was the person you first had sexual intercourse with?	AGE OF PARTNER . . . . . [ ][ ] DON'T KNOW 98	→ 515
514D	Was this person older than you, younger than you, or about the same age as you?	OLDER 1 YOUNGER 2 SAME AGE 3 DON'T KNOW/DON'T REMEMBER 8	[ ] → 515
514E	Would you say this person was ten or more years older than you, or less than ten years older than you?	TEN OR MORE YEARS OLDER 1 LESS THAN TEN YEARS OLDER 2 OLDER, UNSURE HOW MUCH 3	
515	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ]	→ 524
516	The last time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	→ 517
516A	What was the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV . . . . . 01 RESPONDENT WANTED TO PREVENT PREGNANCY . . . . . 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY . . . . . 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS . . . . . 04 PARTNER REQUESTED/INSISTED 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
517	What is your relationship to the man with whom you last had sex? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER . 01 MAN IS BOYFRIEND/FIANCÉ . . . . . 02 OTHER FRIEND . . . . . 03 CASUAL ACQUAINTANCE . . . . . 04 RELATIVE . . . . . 05 PROSTITUTE . . . . . 06 OTHER _____ 96 (SPECIFY)	→ 519
517A	CHECK 106: 15-24 YEARS OLD ☐ ↓ 25-49 YEARS OLD ☐ →		→ 518
517B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER . . . . . 1 ABOUT SAME AGE . . . . . 2 LESS THAN 10 YEARS OLDER . . . . . 3 10 OR MORE YEARS OLDER . . . . . 4 OLDER, DON'T KNOW DIFFERENCE 5 DON'T KNOW 8	
518	For how long (have you had/did you have) sexual relations with this man? IF ONLY HAD SEXUAL RELATIONS WITH THIS MAN ONCE, RECORD '01' DAYS.	DAYS . . . . . 1 ☐☐ WEEKS . . . . . 2 ☐☐ MONTHS . . . . . 3 ☐☐ YEARS . . . . . 4 ☐☐	
519	Have you had sex with any other man in the last 12 months?	YES . . . . . 1 NO 2	→ 524
520	The last time you had sexual intercourse with another man, was a condom used?	YES . . . . . 1 NO 2	→ 521
520A	What was the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV . . . . . 01 RESPONDENT WANTED TO PREVENT PREGNANCY . . . . . 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY . . . . . 03 DID NOT TRUST PARTNER/FELT PARTNER HAD OTHER PARTNERS . . . . . 04 PARTNER REQUESTED/INSISTED 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
521	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER . 01 MAN IS BOYFRIEND/FIANCÉ . . . . . 02 OTHER FRIEND . . . . . 03 CASUAL ACQUAINTANCE . . . . . 04 RELATIVE . . . . . 05 PROSTITUTE . . . . . 06 OTHER _____ 96 (SPECIFY)	→ 522A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
521A	CHECK 106: 15-24 YEARS OLD ☐ (↓) 25-49 YEARS OLD ☐ → 522		
521B	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER . . . . . 1 ABOUT SAME AGE . . . . . 2 LESS THAN 10 YEARS OLDER . . . . . 3 10 OR MORE YEARS OLDER . . . . . 4 OLDER, DON'T KNOW DIFFERENCE 5 DON'T KNOW 8	
522	For how long (have you had/did you have) sexual relations with this man? IF ONLY HAD SEXUAL RELATIONS WITH THIS MAN ONCE, RECORD '01' DAYS.	DAYS . . . . . 1 ☐☐ WEEKS . . . . . 2 ☐☐ MONTHS . . . . . 3 ☐☐ YEARS . . . . . 4 ☐☐	
522A	Other than these two men, have you had sex with any other man in the last 12 months?	YES . . . . . 1 NO 2	→ 524
522B	The last time you had sexual intercourse with this other man, was a condom used?	YES . . . . . 1 NO 2	→ 522D
522C	What was the main reason you used a condom on that occasion?	RESPONDENT WANTED TO PREVENT STD/HIV . . . . . 01 RESPONDENT WANTED TO PREVENT PREGNANCY . . . . . 02 RESPONDENT WANTED TO PREVENT BOTH STD/HIV AND PREGNANCY . . . . . 03 DID NOT TRUST PARTNERS/FELT PARTNER HAD OTHER PARTNERS . . . . . 04 PARTNER REQUESTED/INSISTED 05 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
522D	What is your relationship to this man? IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: Was your boyfriend/fiancé living with you when you last had sex with him? IF YES, CIRCLE '01'. IF NO, CIRCLE '02'.	SPOUSE/COHABITING PARTNER . 01 MAN IS BOYFRIEND/FIANCÉ . . . . . 02 OTHER FRIEND . . . . . 03 CASUAL ACQUAINTANCE . . . . . 04 RELATIVE . . . . . 05 PROSTITUTE . . . . . 06 OTHER _____ 96 (SPECIFY)	→ 523
522D1	CHECK 106: 15-24 YEARS OLD ☐ (↓) 25-49 YEARS OLD ☐ → 522E		
522D2	Was this man younger, about the same age or older than you? IF OLDER: Do you think that he was less than 10 years older than you or 10 or more years older than you?	YOUNGER . . . . . 1 ABOUT SAME AGE . . . . . 2 LESS THAN 10 YEARS OLDER . . . . . 3 10 OR MORE YEARS OLDER . . . . . 4 OLDER, DON'T KNOW DIFFERENCE 5 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
522E	For how long (have you had/did you have) sexual relations with this man? IF ONLY HAD SEXUAL RELATIONS WITH THIS MAN ONCE, RECORD '01' DAYS.	DAYS . . . . . 1 [ ][ ] WEEKS . . . . . 2 [ ][ ] MONTHS . . . . . 3 [ ][ ] YEARS . . . . . 4 [ ][ ]	
523	In total, with how many different men have you had sex in the last 12 months?	NUMBER OF PARTNERS . . . [ ][ ]	
524	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 527
525	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B FAMILY PLANNING CLINIC . . . . . C MOBILE CLINIC . . . . . D FIELDWORKER . . . . . E OTHER PUBLIC _____ F (SPECIFY) MISSION HOSPITAL . . . . . G HEALTH CENTER . . . . . H MOBILE CLINIC . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . J PHARMACY . . . . . K PRIVATE DOCTOR . . . . . L MOBILE CLINIC . . . . . M FIELDWORKER . . . . . N OTHER PRIVATE MEDICAL _____ O (SPECIFY) BLM . . . . . P OTHER SOURCE SHOP . . . . . Q CHURCH . . . . . R FRIENDS/RELATIVES . . . . . S OTHER _____ X (SPECIFY)	
526	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	
527	Have you heard of a condom called "Chishango"?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 6. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 311/311A: NEITHER STERILIZED ↓ / HE OR SHE STERILIZED → 614		
602	CHECK 226: NOT PREGNANT OR UNSURE ↓ / PREGNANT ↓ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 → 604 SAYS SHE CAN'T GET PREGNANT . 3 → 614 UNDECIDED/DK: PREGNANT . . . . . 4 → 610 UNDEC/DK: NOT PREGNANT/UNSURE 5 → 608	
603	CHECK 226: NOT PREGNANT OR UNSURE ↓ / PREGNANT ↓ How long would you like to wait from now before the birth of (a/another) child? After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 → 609 SAYS SHE CAN'T GET PREGNANT 994 → 614 AFTER MARRIAGE . . . . . 995 OTHER _____ 996 → 609 (SPECIFY) DON'T KNOW 998	
604	CHECK 226: NOT PREGNANT OR UNSURE ↓ / PREGNANT → 610		
605	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ↓ / NOT CURRENTLY USING ↓ / CURRENTLY USING → 608		
606	CHECK 603: NOT ASKED ↓ / 24 OR MORE MONTHS OR 02 OR MORE YEARS ↓ / 00-23 MONTHS OR 00-01 YEAR → 610		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
607	CHECK 602: WANTS TO HAVE A/ANOTHER CHILD → You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? WANTS NO MORE/ NONE → You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY . D SUBFECUND/INFECUND . . . . . E POSTPARTUM AMENORRHEIC . . . F BREASTFEEDING . . . . . G FATALISTIC . . . . . H OPPOSITION TO USE RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS HEALTH CONCERNS . . . . . O FEAR OF SIDE EFFECTS . . . . . P LACK OF ACCESS/TOO FAR . . . . . Q COSTS TOO MUCH . . . . . R INCONVENIENT TO USE . . . . . S INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . T OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
608	In the next few weeks, if you discovered that you were pregnant, would that be a big problem, a small problem, or no problem for you?	BIG PROBLEM . . . . . 1 SMALL PROBLEM . . . . . 2 NO PROBLEM . . . . . 3 SAYS SHE CAN'T GET PREGNANT/ NOT HAVING SEX 4	
609	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED NO, NOT CURRENTLY USING YES, CURRENTLY USING → 614		
610	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW . . . . . 8 → 612	
611	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 PERIODIC ABSTINENCE . . . . . 12 WITHDRAWAL . . . . . 13 OTHER _____ 96 (SPECIFY) UNSURE 98	→ 614

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED . . . . . 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . 22 MENOPAUSAL/HYSTERECTOMY 23 SUBFECUND/INFECUND . . . . . 24 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 26 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 31 HUSBAND/PARTNER OPPOSED 32 OTHERS OPPOSED . . . . . 33 RELIGIOUS PROHIBITION . . . . . 34 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 41 KNOWS NO SOURCE . . . . . 42 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 51 FEAR OF SIDE EFFECTS . . . . . 52 LACK OF ACCESS/TOO FAR . . . 53 COSTS TOO MUCH . . . . . 54 INCONVENIENT TO USE . . . . . 55 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 614
613	Would you ever use a contraceptive method if you were married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
614	CHECK 216: HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 616 → 616
615	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
616	Would you say that you approve or disapprove of couples using a contraceptive method to avoid getting pregnant?	APPROVE . . . . . 1 DISAPPROVE . . . . . 2 DON'T KNOW/UNSURE 8	
617	In the last few months have you heard about family planning: On the radio? On the television? In a newspaper or magazine? On a poster? On clothing (i.e., cap, chitenji, t-shirt)? In a drama? Somewhere else? (SPECIFY)	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2 POSTER . . . . . 1 2 CLOTHING . . . . . 1 2 DRAMA . . . . . 1 2 OTHER _____(SPECIFY).. 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
618	In the last few months, have you listened to any of the following program series about family planning or health on the radio?	YES NO	
	Uchembere Wabwino?	UCHEMBERE WABWINO . . 1 2	
	Phukusi la Moyo?	PHUKUSI LA MOYO . . . 1 2	
	Pa Mtondo?	PA MTONDO 1 2	
	Women's Talking Point?	WOMEN'S TALKING PT . . 1 2	
	Window Through Health?	WINDOW THRU HEALTH . . 1 2	
	Umoyo M'Malawi?	UMOYO M'MALAWI . . . 1 2	
	Tikuferanji?	TIKUFERANJI 1 2	
	Radio Doctor?	RADIO DOCTOR 1 2	
	Chitukuku M'Malawi?	CHITUKUKU M'MALAWI . . 1 2	
	Women's Forum?	WOMEN'S FORUM 1 2	
	Tichitenji?	TICHITENJI 1 2	
	Kulera?	KULERA 1 2	
	Other? (SPECIFY)	OTHER_____(SPECIFY) 1 2	
619	In the last few months, have you discussed the practice of family planning with your friends, neighbors, or relatives?	YES . . . . . 1 NO 2	→ 621
620	With whom? Anyone else? RECORD ALL PERSONS MENTIONED.	HUSBAND/PARTNER . . . . . A MOTHER . . . . . B FATHER . . . . . C SISTER(S) . . . . . D BROTHER(S) . . . . . E DAUGHTER(S) . . . . . F SON(S) . . . . . G MOTHER(S)-IN-LAW . . . . . H FRIENDS/NEIGHBORS . . . . . I OTHER _____ X (SPECIFY)	
621	CHECK 501: YES, CURRENTLY MARRIED ↓ ☐ YES, LIVING WITH A MAN ↓ ☐ NO, NOT IN UNION ☐ →		628
622	CHECK 311/311A: ANY CODE CIRCLED ↓ ☐ NO CODE CIRCLED ☐ →		624
623	You have told me that you are currently using contraception. Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
624	Now I want to ask you about your husband's/partner's views on family planning. Do you think that your husband/partner approves or disapproves of couples using a contraceptive method to avoid pregnancy?	APPROVES . . . . . 1 DISAPPROVES . . . . . 2 DON'T KNOW 8	
625	How often have you talked to your husband/partner about family planning in the past year?	NEVER . . . . . 1 ONCE OR TWICE . . . . . 2 MORE OFTEN 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
626	CHECK 311/311A: NEITHER STERILIZED ↓ HE OR SHE STERILIZED → 628		
627	Do you think your husband/partner wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	
628	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:	YES NO DK	
	She knows her husband has a sexually transmitted disease?	HAS STD 1 2 8	
	She knows her husband has sex with women other than his wife or wives?	OTHER WOMEN 1 2 8	
	She has recently given birth?	RECENT BIRTH 1 2 8	
	She is tired or not in the mood?	TIRED/NOT IN MOOD 1 2 8	
628A	When a wife knows her husband has a sexually transmitted disease, is she justified in asking that they use a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ FORMERLY MARRIED/ LIVED WITH A MAN ☐ → 703 NEVER MARRIED AND NEVER LIVED WITH A MAN ☐ → 707		
702	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
703	Did your (last) husband/partner ever attend school?	YES . . . . . 1 NO 2	→ 706
704	What was the highest level of school he attended: primary, secondary, or higher?	PRIMARY . . . . . 1 SECONDARY . . . . . 2 HIGHER . . . . . 3 DON'T KNOW 8	→ 706
705	What was the highest (class/form/year) he completed at that level?	CLASS . . . . . ☐☐ DON'T KNOW 98	
706	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ ↓ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	_____ ☐☐ _____ _____	
707	Aside from your own housework, are you currently working?	YES . . . . . 1 NO 2	→ 710
708	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES . . . . . 1 NO 2	→ 710
709	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 719
710	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
711	CHECK 710: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ → 713		
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND 4	
713	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
714	Do you usually work at home or away from home?	HOME . . . . . 1 AWAY 2	
715	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	→ 719
717	Who mainly decides how the money you earn will be used?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE . . . . . 4 RESPONDENT AND SOMEONE ELSE JOINTLY 5	
718	On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all?	ALMOST NONE . . . . . 1 LESS THAN HALF . . . . . 2 ABOUT HALF . . . . . 3 MORE THAN HALF . . . . . 4 ALL . . . . . 5 NONE, HER INCOME IS ALL SAVED . 6	
719	Who in your family usually has the final say on the following decisions:	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 RESPONDENT & SOMEONE ELSE JOINTLY = 5 DECISION NOT MADE/NOT APPLICABLE = 6	
	Your own health care?	1 2 3 4 5 6	
	Making large household purchases?	1 2 3 4 5 6	
	Making household purchases for daily needs?	1 2 3 4 5 6	
	Visits to family or relatives?	1 2 3 4 5 6	
	What food should be cooked each day?	1 2 3 4 5 6	
720	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES/ LISTEN. / PRES/ NOT LISTEN. / NOT PRES	
	CHILDREN < 10	1 2 8	
	HUSBAND	1 2 8	
	OTHER MALES	1 2 8	
	OTHER FEMALES . . .	1 2 8	
721	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	
	If she has an extramarital affair?	AFFAIR 1 2 8	
722	Sometimes a wife is annoyed or angered by things that her husband does. In your opinion, is a wife justified in hitting or beating her husband in the following situations:	YES / NO / DK	
	If he neglects to support the family financially?	NEGLECTS SUPPORT . 1 2 8	
	If he gets drunk frequently?	DRUNK 1 2 8	
	If he argues with her?	ARGUES 1 2 8	
	If he refuses to have sex with her?	REFUSES SEX 1 2 8	
	If he has sex with a woman who is not his wife?	SEX WITH ANOTHER . 1 2 8	

SECTION 8. HIV/AIDS AND OTHER SEXUALLY TRANSMITTED INFECTIONS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 817A
802	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 809
803	What can a person do? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX . . . . . A USE CONDOMS . . . . . B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER . . . C LIMIT NUMBER OF SEXUAL PARTNERS . . . . . D AVOID SEX WITH PROSTITUTES . . . E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS . . . . . F AVOID SEX WITH HOMOSEXUALS . G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY . H AVOID BLOOD TRANSFUSIONS . . . . . I AVOID INJECTIONS . . . . . J AVOID SHARING RAZORS/BLADES . K AVOID KISSING . . . . . L AVOID MOSQUITO BITES . . . . . M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER . . . N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
804	Can people reduce their chances of getting the AIDS virus by having just one sex partner who has no other partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
805	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
806	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
807	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
808	Can people reduce their chance of getting the AIDS virus by not having sex at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
808A	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
809	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
810	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811	Can the virus that causes AIDS be transmitted from a mother to a child?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 813
812	Can the virus that causes AIDS be transmitted from a mother to a child: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
812A	CHECK 812: AT LEAST ONE 'YES' ↓ OTHER →		→ 812C
812B	Are there any special medications that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
812C	Is there any special medication that people infected with the AIDS virus can get from a doctor or a nurse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
813	CHECK 501: YES, CURRENTLY MARRIED/ LIVING WITH A MAN ↓ NO, NOT IN UNION →		→ 814A
814	Have you ever talked about ways to prevent getting the virus that causes AIDS with (your husband/the man you are living with)?	YES . . . . . 1 NO 2	
814A	In your opinion, is it acceptable or unacceptable for AIDS to be discussed: on the radio? on the TV? in newspapers?	ACCEPT-ABLE NOT ACCEPT-ABLE ON THE RADIO . . . . . 1 2 ON THE TV . . . . . 1 2 IN NEWSPAPERS . . . 1 2	
814B	Would you buy fresh vegetables from a vendor who has the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
814C	If a member of your family got infected with the virus that causes AIDS, would you fear disclosing their status?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE 8	
814D	If a member of your extended family such as a cousin died of AIDS and left orphaned children behind, would you be willing to take those children as part of your family?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
814E	If a female teacher has the AIDS virus, should she be allowed to continue teaching in the school?	CAN CONTINUE . . . . . 1 SHOULD NOT CONTINUE . . . . . 2 DK/NOT SURE/DEPENDS 8	
816	Should persons with the AIDS virus who work with other persons such as in a shop, office, or farm be allowed to continue their work or not?	CAN CONTINUE WORK . . . . . 1 SHOULD NOT CONTINUE WORK . . . 2 DK/NOT SURE/DEPENDS 8	
816A	Are people who have AIDS immoral?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
816B	Should children age 12-14 be taught about using a condom to avoid AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816C	Do you think that condoms are safe to use?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
816D	Do you think that men and women who intend to marry should be tested for the AIDS virus before marriage?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
816E	Have you heard any radio spots or messages with regard to HIV/AIDS in the last 30 days?	YES . . . . . 1 NO 2	
816F	Have you seen any TV spots or programs with regard to HIV/AIDS in the last 30 days?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816G	Have you read articles, messages or advertisements about HIV/AIDS in a magazine or newspaper in the last 30 days?	YES . . . . . 1 NO 2	
816H	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 816L
816I	When was the last time you were tested?	LESS THAN 12 MONTHS . . . . . 1 12-23 MONTHS . . . . . 2 2 YEARS OR MORE 8	
816J	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST . . . . . 1 OFFERED AND ACCEPTED . . . . . 2 REQUIRED 3	
816K	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 816MX
816L	Do you know a place where you could go to get an AIDS test?	YES . . . . . 1 NO 2	→ 816P
816M 816MX	Where can you go for the test? RECORD ONLY FIRST RESPONSE GIVEN. Where did you go for the test? _____ (NAME OF PLACE) IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.	PUBLIC SECTOR GOVERNMENT HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 FAMILY PLANNING CLINIC . . . . . 13 MOBILE CLINIC . . . . . 14 FIELDWORKER . . . . . 15 OTHER PUBLIC _____ 16 (SPECIFY) MISSION HOSPITAL . . . . . 21 HEALTH CENTER . . . . . 22 MOBILE CLINIC . . . . . 23 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 31 PHARMACY . . . . . 32 PRIVATE DOCTOR . . . . . 33 MOBILE CLINIC . . . . . 34 FIELDWORKER . . . . . 35 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) BLM . . . . . 41 MACRO . . . . . 51 OTHER _____ 96 (SPECIFY)	
816P	CHECK 515: RESPONDENT HAD SEX IN THE 12 MONTHS PRIOR TO THE SURVEY ↓	RESPONDENT HAS NOT HAD SEX IN THE PAST 12 MONTHS, OR WAS NOT ASKED Q 515. →	→ 817A
817	Do you know the HIV status of any partner with whom you have had sex in the past year?	YES . . . . . 1 NO 2	
817A	Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	→ 819A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
818	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE/DRIPPING . . . B FOUL SMELLING DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K IMPOTENCE . . . . . L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS . . . . . Y DON'T KNOW . . . . . Z	
819	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN . . . . . A GENITAL DISCHARGE . . . . . B FOUL SMELLING DISCHARGE . . . . . C BURNING PAIN ON URINATION . . . . . D REDNESS/INFLAMMATION IN GENITAL AREA . . . . . E SWELLING IN GENITAL AREA . . . . . F GENITAL SORES/ULCERS . . . . . G GENITAL WARTS . . . . . H GENITAL ITCHING . . . . . I BLOOD IN URINE . . . . . J LOSS OF WEIGHT . . . . . K HARD TO GET PREGNANT/HAVE A CHILD . . . . . L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS . . . . . Y DON'T KNOW . . . . . Z	
819A	CHECK 514: HAS HAD SEXUAL INTERCOURSE ↓ HAS NOT HAD SEXUAL INTERCOURSE →		901
819A1	CHECK 817A: KNOWS STI ↓ DOES NOT KNOW STI →		819C
819B	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a sexually-transmitted disease?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
819C	Sometimes, women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819D	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
819E	CHECK 819B, 819C, 819D: HAS HAD AN INFECTION ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW →		901
819F	The last time you had (PROBLEM FROM 819B/819C/819D), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 819H
819G	The last time you had (PROBLEM FROM 819B/819C/819D), did you do any of the following? Did you…	YES NO	
	Go to a clinic, hospital or private doctor?	CLINIC/HOSPITAL 1 2	
	Consult a traditional healer?	TRADITIONAL HEALER 1 2	
	Seek advice or buy medicines in a shop or pharmacy?	SHOP/PHARMACY 1 2	
	Ask for advice from friends or relatives?	FRIENDS/RELATIVES 1 2	
819H	When you had (PROBLEM FROM 819B/819C/819D), did you inform the person with whom you were having sex?	YES . . . . . 1 NO . . . . . 2 SOME/NOT ALL . . . . . 3 DID NOT HAVE PARTNER 4	→ 901
819I	When you had (PROBLEM FROM 819B/819C/819D), did you do something to avoid infecting your sexual partner(s)?	YES . . . . . 1 NO . . . . . 2 PARTNER ALREADY INFECTED . . . 3	→ 901
819J	What did you do to avoid infecting your partner(s)? Did you…	YES NO	
	Use medicine?	USE MEDICINE 1 2	
	Stop having sex?	STOP SEX 1 2	
	Use a condom when having sex?	USE CONDOM 1 2	

SECTION 9. MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER . . . . . ☐☐	
902	CHECK 901: TWO OR MORE BIRTHS ↓	ONLY ONE BIRTH (RESPONDENT ONLY) ☐ →	914
903	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS . . . . . ☐☐	

904	What was the name given to your oldest (next oldest) brother or sister?	(1) _____	(2) _____	(3) _____	(4) _____	(5) _____	(6) _____
905	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
906	Is (NAME) still alive?	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (2)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (3)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (4)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (5)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (6)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (7)
907	How old is (NAME)?	☐☐ GO TO (2)	☐☐ GO TO (3)	☐☐ GO TO (4)	☐☐ GO TO (5)	☐☐ GO TO (6)	☐☐ GO TO (7)
908	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
909	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
910	Was (NAME) pregnant when she died?	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2
911	Did (NAME) die during childbirth?	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2
912	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
913	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐

IF NO MORE BROTHERS OR SISTERS, GO TO 914.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES					SKIP
904	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
905	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
906	Is (NAME) still alive?	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (8)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (9)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (10)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (11)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (12)	YES . . . 1 NO . . . 2 → GO TO 908 DK . . . 8 → GO TO (13)
907	How old is (NAME)?	☐☐ GO TO (8)	☐☐ GO TO (9)	☐☐ GO TO (10)	☐☐ GO TO (11)	☐☐ GO TO (12)	☐☐ GO TO (13)
908	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
909	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (8)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
910	Was (NAME) pregnant when she died?	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2
911	Did (NAME) die during childbirth?	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2	YES . . . 1 → GO TO 913 NO . . . 2
912	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
913	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐

IF NO MORE BROTHERS OR SISTERS, GO TO 914.

914	CHECK Q910, 911 AND 912 FOR ALL SISTERS ☐ ANY YES (↓) ALL NO OR BLANK ☐ → DV00 Just to make sure I have this right, you told me that your sister(s) _____ (NAME) died when she was (pregnant/delivering/just delivered). Is that correct? IF CORRECT, CONTINUE TO DV00. IF NOT, CORRECT QUESTIONNAIRE AND CONTINUE TO 914.	

SECTION 10: DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV00	CHECK HOUSEHOLD QUESTIONNAIRE, COLUMN (8A): WOMAN SELECTED FOR THIS SECTION ☐↓ WOMAN NOT SELECTED ☐ → DV29		
DV01	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL EFFECTIVE PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 ↓ PRIVACY NOT POSSIBLE . . . . . 2 → DV28		
	READ TO ALL RESPONDENTS: Now I would like to ask you questions about some other important aspects of a woman's life. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of women in Malawi. Let me assure you that your answers are completely confidential and will not be told to anyone.		
DV02	CHECK 501, 502, AND 504: CURRENTLY MARRIED/ LIVING WITH A MAN ☐↓ WIDOWED/ SEPARATED/ DIVORCED ☐↓ (READ IN PAST TENSE) NEVER MARRIED/ NEVER LIVED WITH A MAN ☐ → DV14		
DV03	When two people marry or live together, they share both good and bad moments. In your relationship with your (last) husband/partner do (did) the following happen frequently, only sometimes, or never? a) He usually (spends/spent) his free time with you? b) He (consults/consulted) you on different household matters? c) He (is/was) affectionate with you? d) He (respects/respected) you and your wishes?	FREQUENTLY / SOMETIMES / NEVER FREE TIME . . . . . 1 2 3 CONSULTS . . . . . 1 2 3 AFFECTIONATE . . . 1 2 3 RESPECTS 1 2 3	
DV04	Now I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your (last) husband/partner? a) He (is/was) jealous or angry if you (talk/talked) to other men? b) He frequently (accuses/accused) you of being unfaithful? c) He (does/did) not permit you to meet your female friends? d) He (tries/tried) to limit your contact with your family? e) He (insists/insisted) on knowing where you (are/were) at all times? f) He (does/did) not trust you with any money?	YES / NO / DK JEALOUS . . . . . 1 2 8 ACCUSES . . . . . 1 2 8 NOT MEET FRIENDS 1 2 8 NO FAMILY . . . . . 1 2 8 WHERE YOU ARE . 1 2 8 MONEY 1 2 8	
DV05	Now if you will permit me, I need to ask some more questions about your relationship with your (last) husband/ partner. 5A. (Does/did) your (last) husband/partner ever: 5B. How many times did this happen during the last 12 months? a) say or do something to humiliate you in front of others? YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓ b) Threaten you or someone close to you with harm? YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV06	6A. (Does/did) your (last) husband/partner ever:	6B. How many times did this happen during the last 12 months?	
	a) push you, shake you, or throw something at you?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	b) slap you or twist your arm?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	c) punch you with his fist or with something that could hurt you?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	d) kick you or drag you?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	e) try to strangle you or burn you?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	f) threaten you with a knife, gun, or other type of weapon?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	g) attack you with a knife, gun, or other type of weapon?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	h) physically force you to have sexual intercourse with him even when you did not want to?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	i) force you to perform other sexual acts you did not want to?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
DV07	CHECK DV06: AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐		→ DV09
DV08	How long after you first got married to/started living with your (last) husband/partner did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95 AFTER SEPARATION/DIVORCE 96	
DV09	9A. Did the following ever happen because of something your (last) husband/partner did to you:	9B. How many times did this happen during the last 12 months?	
	a) You had bruises and aches?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	b) You had an injury or a broken bone?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
	c) You went to the doctor or health center as a result of something your husband/partner did to you?	YES 1 → TIMES IN LAST 12 MONTHS . . . . . ☐☐ NO 2 ↓	
DV10	Have you ever hit, slapped, kicked or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?	YES . . . . . 1 NO 2	→ DV12
DV11	In the last 12 months, how many times have you hit, slapped, kicked or done something to physically hurt your (last) husband/partner at a time when he was not already beating or physically hurting you?	NUMBER OF TIMES . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV12	Does (did) your husband/partner drink alcohol?	YES . . . . . 1 NO 2	→ DV14
DV12A	How often does (did) he get drunk: very often, only sometimes, or never?	VERY OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
DV14	CHECK 501, 502 & 504: MARRIED/LIVING WITH A MAN/SEPARATED/ DIVORCED/WIDOWED: From the time you were 15 years old has anyone other than your (current/last) husband/partner hit, slapped, kicked, or done anything else to hurt you physically? NEVER MARRIED/ NEVER LIVED WITH A MAN: From the time you were 15 years old has anyone ever hit, slapped, kicked, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 NO ANSWER 6	→ DV19
DV15	Who has physically hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER . . . . . A FATHER . . . . . B STEP-MOTHER . . . . . C STEP-FATHER . . . . . D SISTER . . . . . E BROTHER . . . . . F DAUGHTER . . . . . G SON . . . . . H LATE/EX-HUSBAND/EX-PARTNER . . . . I CURRENT BOYFRIEND . . . . . J FORMER BOYFRIEND . . . . . K MOTHER-IN-LAW . . . . . L FATHER-IN-LAW . . . . . M OTHER FEMALE RELATIVE/IN-LAW . N OTHER MALE RELATIVE/ IN-LAW . . . . O FEMALE FRIEND/ACQUAINTANCE . P MALE FRIEND/ACQUAINTANCE . . . . . Q TEACHER . . . . . R EMPLOYER . . . . . S STRANGER . . . . . T OTHER _____ X (SPECIFY)	
DV16	CHECK DV15: MORE THAN ONE PERSON MENTIONED ☐ ↓ ONLY ONE PERSON MENTIONED ☐ →		DV18

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV17	Who has hit, slapped, kicked, or done something to physically hurt you most often?	MOTHER . . . . . 01 FATHER . . . . . 02 STEP-MOTHER . . . . . 03 STEP-FATHER . . . . . 04 SISTER . . . . . 05 BROTHER . . . . . 06 DAUGHTER . . . . . 07 SON . . . . . 08 LATE/EX-HUSBAND/EX-PARTNER . . . . 09 CURRENT BOYFRIEND . . . . . 10 FORMER BOYFRIEND . . . . . 11 MOTHER-IN-LAW . . . . . 12 FATHER-IN-LAW . . . . . 13 OTHER FEMALE RELATIVE/IN-LAW 14 OTHER MALE RELATIVE/ IN-LAW . . . . 15 FEMALE FRIEND/ACQUAINTANCE 16 MALE FRIEND/ACQUAINTANCE . . . . . 17 TEACHER . . . . . 18 EMPLOYER . . . . . 19 STRANGER . . . . . 20 OTHER _____ 96 (SPECIFY)	
DV18	In the last 12 months, how many times has this person hit, slapped, kicked, or done anything else to physically hurt you?	NUMBER OF TIMES . . . . . ☐☐	
DV19	CHECK 201 AND 226: HAS ONE OR MORE LIVE OR NON-LIVE BIRTHS OR IS CURRENTLY PREGNANT ☐ ↓ NO LIVE BIRTHS, NO NON-LIVE BIRTHS, AND IS NOT CURRENTLY PREGNANT ☐ →		DV21A
DV20	Has any one ever hit, slapped, kicked, or done anything else to hurt you physically while you were pregnant?	YES . . . . . 1 NO . . . . . 2 →	DV21A
DV21	Who has done any of these things to physically hurt you while you were pregnant? Anyone else? RECORD ALL MENTIONED.	CURRENT HUSBAND/PARTNER . . . . A MOTHER . . . . . B FATHER . . . . . C STEP-MOTHER . . . . . D STEP-FATHER . . . . . E SISTER . . . . . F BROTHER . . . . . G DAUGHTER . . . . . H SON . . . . . I LATE/EX-HUSBAND/EX-PARTNER . . . . J CURRENT BOYFRIEND . . . . . K FORMER BOYFRIEND . . . . . L MOTHER-IN-LAW . . . . . M FATHER-IN-LAW . . . . . N OTHER FEMALE RELATIVE/IN-LAW . . O OTHER MALE RELATIVE/ IN-LAW . . . . P FEMALE FRIEND/ACQUAINTANCE . Q MALE FRIEND/ACQUAINTANCE . . . . . R TEACHER . . . . . S EMPLOYER . . . . . T STRANGER . . . . . U OTHER _____ X (SPECIFY)	
DV21A	CHECK Q514: EVER HAD SEX? HAS EVER HAD SEX ☐ ↓ NEVER HAD SEX ☐ →		DV22

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV21B	The first time you had sexual intercourse, would you say that you had it because you wanted to, or because you were forced to have it against your will?	WANTED TO . . . . . 1 FORCED TO . . . . . 2 REFUSED TO ANSWER/NO RESPNSE 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV21C	In the last 12 months, has anyone forced you to have sexual intercourse against your will?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/NO RESPNSE 3	
DV22	CHECK DV06, DV09, DV14, AND DV20: AT LEAST ONE 'YES' ☐ NOT A SINGLE 'YES' ☐ → DV26		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV23	Have you ever tried to get help to prevent or stop (this person/ these persons) from physically hurting you?	YES . . . . . 1 NO 2	→ DV25
DV24	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	MOTHER . . . . . A FATHER . . . . . B SISTER . . . . . C BROTHER . . . . . D CURRENT/LAST/LATE HUSBAND/PARTNER . . . . . E CURRENT/FORMER BOYFRIENI . . . . . F MOTHER-IN-LAW . . . . . G FATHER-IN-LAW . . . . . H OTHER FEMALE RELATIVE/IN-LAW . I OTHER MALE RELATIVE/ IN-LAW . . . . J FRIEND . . . . . K NEIGHBOR . . . . . L TEACHER . . . . . M EMPLOYER . . . . . N RELIGIOUS LEADER . . . . . O DOCTOR/MEDICAL PERSONNE . . . . . P POLICE . . . . . Q LAWYER . . . . . R OTHER _____ X (SPECIFY)	→ DV26
DV25	What is the main reason you have never sought help?	DON'T KNOW WHO TO GO TO . . . . 01 NO USE . . . . . 02 PART OF LIFE . . . . . 03 AFRAID OF DIVORCE/DESERTION 04 AFRAID OF FURTHER BEATINGS . 05 AFRAID OF GETTING PERSON BEATING HER INTO TROUBLE 06 EMBARRASSED . . . . . 07 DON'T WANT TO DISGRACE FAMILY . . . . . 08 OTHER _____ 96 (SPECIFY)	
DV26	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

THANK THE RESPONDENT FOR HER COOPERATION AND REASSURE HER ABOUT THE CONFIDENTIALITY OF HER ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.

			YES ONCE	YES, MORE THAN ONCE	NO
DV27	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?	HUSBAND	1	2	3
		OTHER MALE ADULT	1	2	3
		FEMALE ADULT	1	2	3

DV28 INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE

_____

_____

_____

DV29	RECORD THE TIME.	HOUR . . . . . MINUTES	

SECTION 11. ANTHROPOMETRY, ANEMIA AND HIV TESTING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	ANTHROPOMETRY		
1101	WEIGHT (KILOGRAMS): ☐☐☐.☐		
1101A	HEIGHT (CENTIMETERS): ☐☐☐.☐		
1101B	RESULT: MEASURED . . . . . 1 REFUSED . . . . . 2 ABSENT . . . . . 3 OTHER _____ 6 (SPECIFY)		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	ANEMIA		
1102	CHECK 106: AGE IS 15-17 ☐ → AGE IS 18-54 ☐ → 1105		
1103	LINE NUMBER OF PARENT/ RESPONSIBLE ADULT: ☐☐ (FROM COLUMN 1 IN HOUSEHOLD SCHEDULE) (IF PARENT OR RESPONSIBLE ADULT IS NOT IN HOUSEHOLD, WRITE "00")		
1104	READ THE ANEMIA CONSENT STATEMENT TO THE **PARENT OR RESPONSIBLE ADULT** CIRCLE CODE AND SIGN	CONSENT_____ (SIGN) . . . 1 REFUSED . . . . . 2 NOT READ 8	→ 1106
1105	READ THE ANEMIA CONSENT STATEMENT TO THE **WOMAN OR ADOLESCENT** CIRCLE CODE AND SIGN	CONSENT_____ (SIGN) . . . 1 REFUSED . . . . . 2 NOT READ 8	→ 1106

REQUEST FOR CONSENT FOR ANEMIA TEST

As part of this survey, we are studying anemia among women and children. Anemia is a serious health problem. You do not have to participate; however, if you do, it will help the government to develop programs to prevent and treat anemia.

We request that you participate in the anemia testing part of this survey and give a few drops of blood from a finger or from the heel of the child. The test uses disposable sterile instruments that are clean and completely safe. The blood will be analyzed with new equipment and the results of the test will be given to you right after the blood is taken. If your results show that you are mildly or moderately anemic you will be briefed on how to decrease your anemia. If your results show you are severely anemic you need to see your doctor or health center immediately. We will give you a paper with the results that you can take with you and show to the health worker for proper medical attention. We will keep the results confidential.

Do you have any questions? Do you agree to have the test done? **IF YES: CONTINUE WITH HIV CONSENT FORM**

1106	**RESULTS:** BLOOD TAKEN . . . . . 1 REFUSED . . . . . 2 ABSENT . . . . . 3 TECHNICAL PROBLEM . . . . . 4 OTHER _____ (SPECIFY) 6 →	(SKIP TO 1111)
1107	HEMOGLOBIN LEVEL (G/DL): ☐☐.☐	
1108	CURRENTLY PREGNANT: YES . . . . . 1 NO/DON'T KNOW . . . 2	
1109	CHECK 1107: THE CUTOFF POINT IS 9 G/DL FOR PREGNANT WOMEN AND 7 G/DL FOR WOMEN WHO ARE NOT PREGNANT (OR WHO DON'T KNOW IF THEY ARE PREGNANT). HEMOGLOBIN LEVEL BELOW THE CUTOFF POINT ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND CONTINUE WITH 1110. HEMOGLOBIN LEVEL NORMAL ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT	
1110	We detected a low level of hemoglobin in your blood. This indicates that you have developed severe anemia, which is a serious health problem. We would like to inform the doctor at _____ about your condition. This will assist you in obtaining appropriate treatment for the condition. Do you agree that the information about the level of hemoglobin in your blood may be given to the doctor? AGREES TO REFERRAL? YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	HIV		
1111	CHECK 1102: AGE IS 15-17 ☐ ↓ AGE IS 18-54 ☐ →		→ 1114
1112	LINE NUMBER OF PARENT/ RESPONSIBLE ADULT: ☐☐ (FROM 1103; IF PARENT OR RESPONSIBLE ADULT IS NOT IN HOUSEHOLD, WRITE "00")		
1113	READ THE CONSENT TO THE **PARENT OR RESPONSIBLE ADULT** CIRCLE CODE AND SIGN	CONSENT_____ (SIGN) . . . 1 REFUSED . . . . . 2 NOT READ 8	→ 1115
1114	READ THE CONSENT TO THE **WOMAN OR ADOLESCENT** CIRCLE CODE AND SIGN	CONSENT_____ (SIGN) . . . 1 REFUSED . . . . . 2 NOT READ 8	→ 1115
1115	**RESULTS:** BLOOD TAKEN . . . . . 1 REFUSED . . . . . 2 ABSENT . . . . . 3 TECHNICAL PROBLEM . . . . . 4 OTHER _____ 6 (SPECIFY)	**PASTE FIRST LABEL HERE** PASTE SECOND LABEL ON FILTER PAPER AND THE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM	

REQUEST FOR CONSENT FOR HIV TEST

We would also like to ask you to participate in the HIV test at the same time, by allowing us to collect a few more drops of blood from your finger. As part of the survey, we are asking people all over the country to help find out how big the AIDS problem is in Malawi.

This blood will be tested later in the laboratory. To ensure the confidentiality of this test result, no individual names will be attached to the blood sample; therefore, we will not be able to give you the result of your test and no one will be able to trace the test back to you.

However, if you want to know whether you have HIV, I can tell you where you can go to get tested. You can go to a Voluntary Counselling and Testing (VCT) Centre where you will receive free counseling and confirmed HIV test results that same day. We will provide you with a voucher for yourself, and a voucher for your partner, which either of you can use at the VCT Centre in the next 30 days. With the voucher, there will be no charge for the service, and you will be reimbursed for your travel costs upon receiving the VCT services, and you will meet trained staff available to discuss with you al issues and matters regarding HIV/AIDS. They will provide you with an HIV test and appropriate counseling.

Do you have any questions?

I hope you will agree to participate in the HIV testing. You can say yes or you can say no; it is up to you. However, if you agree, it will help the government to develop programs to fight the problem of HIV/AIDS in Malawi.

Will you agree to participate in the HIV test?

GO TO 1114, CIRCLE THE APPROPRIATE CODE (AND SIGN).

IF RESPONDENT IS AGE 15-17:
ASK PARENT/GUARDIAN: Will you tell me if you will allow (NAME OF YOUTH) to participate in the HIV test? GO TO COLUMN 1113, CIRCLE THE APPROPRIATE CODE (AND SIGN).

IF PARENT/GUARDIAN AGREES, READ THE PRECEDING PARAGRAPHS TO YOUTH FOR HIS/HER CONSENT. GO TO COLUMN 1114, CIRCLE THE APPROPRIATE CODE (AND SIGN).

* DON'T FORGET TO GIVE EACH ELIGIBLE PERSON TWO REFERRAL VOUCHERS FOR FREE HIV TESTS/TRAVEL EXPENSES TO VCT SITE

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
FOR COLUMNS 1 AND 4, ALL MONTHS SHOULD BE FILLED IN.

INFORMATION TO BE CODED FOR EACH COLUMN

COL. 1: BIRTHS, PREGNANCIES, CONTRACEPTIVE USE

- B BIRTHS
- P PREGNANCIES
- T TERMINATIONS

- 0 NO METHOD
- 1 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 PILL
- 4 IUD
- 5 INJECTABLES
- 6 IMPLANTS
- 7 CONDOM
- 8 FEMALE CONDOM
- L PERIODIC ABSTINENCE
- M WITHDRAWAL
- X OTHER _____ (SPECIFY)

COL. 2: SOURCE OF CONTRACEPTION

- 1 GOVT. HOSPITAL
- 2 GOVT. HEALTH CENTER
- 3 FAMILY PLANNING CLINIC
- 4 GOVT. MOBILE CLINIC
- 5 GOVT. FIELDWORKER
- 6 OTHER PUBLIC
- 7 MISSION HOSPITAL
- 8 MISSION HEALTH CENTER
- 9 MISSION MOBILE CLINIC
- A PVT. HOSPITAL/CLINIC
- B PHARMACY
- C PRIVATE DOCTOR
- D PVT. MOBILE CLINIC
- E PVT. FIELDWORKER
- F OTHER PRIVATE MEDICAL
- G BLM
- H SHOP
- I FRIENDS/RELATIVES
- X OTHER _____ (SPECIFY)

COL. 3: DISCONTINUATION OF CONTRACEPTIVE USE

- 0 INFREQUENT SEX/HUSBAND AWAY
- 1 BECAME PREGNANT WHILE USING
- 2 WANTED TO BECOME PREGNANT
- 3 HUSBAND/PARTNER DISAPPROVED
- 4 WANTED MORE EFFECTIVE METHOD
- 5 HEALTH CONCERNS
- 6 SIDE EFFECTS
- 7 LACK OF ACCESS/TOO FAR
- 8 COSTS TOO MUCH
- 9 INCONVENIENT TO USE
- F FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D MARITAL DISSOLUTION/SEPARATION
- X OTHER _____ (SPECIFY)
- Z DON'T KNOW

COL. 4: MARRIAGE/UNION

- X IN UNION (MARRIED OR LIVING TOGETHER)
- 0 NOT IN UNION

				1	2	3	4			
	12	DEC	01					01	DEC	
	11	NOV	02					02	NOV	
	10	OCT	03					03	OCT	
	09	SEP	04					04	SEP	
2	08	AUG	05					05	AUG	2
0	07	JUL	06					06	JUL	0
0	06	JUN	07					07	JUN	0
4	05	MAY	08					08	MAY	4
	04	APR	09					09	APR	
	03	MAR	10					10	MAR	
	02	FEB	11					11	FEB	
	01	JAN	12					12	JAN	
	12	DEC	13					13	DEC	
	11	NOV	14					14	NOV	
	10	OCT	15					15	OCT	
	09	SEP	16					16	SEP	
2	08	AUG	17					17	AUG	2
0	07	JUL	18					18	JUL	0
0	06	JUN	19					19	JUN	0
3	05	MAY	20					20	MAY	3
	04	APR	21					21	APR	
	03	MAR	22					22	MAR	
	02	FEB	23					23	FEB	
	01	JAN	24					24	JAN	
	12	DEC	25					25	DEC	
	11	NOV	26					26	NOV	
	10	OCT	27					27	OCT	
	09	SEP	28					28	SEP	
2	08	AUG	29					29	AUG	2
0	07	JUL	30					30	JUL	0
0	06	JUN	31					31	JUN	0
2	05	MAY	32					32	MAY	2
	04	APR	33					33	APR	
	03	MAR	34					34	MAR	
	02	FEB	35					35	FEB	
	01	JAN	36					36	JAN	
	12	DEC	37					37	DEC	
	11	NOV	38					38	NOV	
	10	OCT	39					39	OCT	
	09	SEP	40					40	SEP	
2	08	AUG	41					41	AUG	2
0	07	JUL	42					42	JUL	0
0	06	JUN	43					43	JUN	0
1	05	MAY	44					44	MAY	1
	04	APR	45					45	APR	
	03	MAR	46					46	MAR	
	02	FEB	47					47	FEB	
	01	JAN	48					48	JAN	
	12	DEC	49					49	DEC	
	11	NOV	50					50	NOV	
	10	OCT	51					51	OCT	
	09	SEP	52					52	SEP	
2	08	AUG	53					53	AUG	2
0	07	JUL	54					54	JUL	0
0	06	JUN	55					55	JUN	0
0	05	MAY	56					56	MAY	0
	04	APR	57					57	APR	
	03	MAR	58					58	MAR	
	02	FEB	59					59	FEB	
	01	JAN	60					60	JAN	
	12	DEC	61					61	DEC	
	11	NOV	62					62	NOV	
	10	OCT	63					63	OCT	
	09	SEP	64					64	SEP	
1	08	AUG	65					65	AUG	1
9	07	JUL	66					66	JUL	9
9	06	JUN	67					67	JUN	9
9	05	MAY	68					68	MAY	9
	04	APR	69					69	APR	
	03	MAR	70					70	MAR	
	02	FEB	71					71	FEB	
	01	JAN	72					72	JAN	

APPENDIX B. Malawi Diffusion and Ideational Project 2006

THE ROLE OF INFORMAL CONVERSATIONS ON HEALTH AND AIDS BEHAVIOR IN MALAWI, 2006

EVER-MARRIED WOMEN'S MAIN SURVEY QUESTIONNAIRE – ENGLISH

RESPONDENT'S IDENTIFICATION
Village name and number_____ [__|__|__]
Headman's name_____
Head of compound _____
Respondent's name and Respondent ID_____ [_____]
Respondent's other names/nicknames_____
Respondent's level of education (circle and fill in level): (0) No school (1) Primary- Level_____ (2) Secondary- Level_____ (3) Higher
Respondent's birthplace (District and Village)_____
Respondent's father's name_____
Respondent's age (estimate if respondent doesn't know) [__|__] Check if age was estimated by interviewer [__]
Respondent's marital status 1.....MARRIED 33.....NEVER MARRIED 44.....SEPARATED 55……DIVORCED 66.....WIDOWED
Husband's name _____ # living children _____
Husband's other names/nicknames_____
Husband's birthplace (District and village)_____
Husband's level of education (circle and fill in level): (0) No school (1) Primary- Level____ (2) Secondary- Level_____ (3) Higher

INTERVIEWER'S VISITS				
	VISIT # 1	**VISIT # 2**	**VISIT # 3**	**FINAL VISIT**
DATE (DD/MM/YY):	[__|__]/[__|__]/[__|__]	[__|__]/[__|__]/[__|__]	[__|__]/[__|__]/[__|__]	DAY [__|__]
TIME (hh:mm):	[__|__]:[__|__]	[__|__]:[__|__]	[__|__]:[__|__]	MONTH [__|__]
INTERVIEWER'S NUM:	[__|__|__]	[__|__|__]	[__|__|__]	INTERVIEWER [__|__|__]
RESULT*:	OUTCOME [__]	OUTCOME [__]	OUTCOME [__]	FINAL VISIT RESULT* [__]
NEXT VISIT:	DATE_____ TIME_____	DATE_____ TIME_____	DATE_____ TIME_____	
* RESULT CODES:	**1** = COMPLETED **2** = REFUSED **3** = HOSPITALIZED	**4** = DEAD **5** = RESPONDENT NOT KNOWN	**6** = TEMPORARILY ABSENT **7** = MOVED TO: _____	**8** = OTHER (SPECIFY): _____
** LANGUAGE CODES:	1= TUMBUKA	2= YAO	3= CHICHEWA	4=OTHER(_____)

	SUPERVISOR	**LOGGED BY**	**CHECKED BY**	**ENTERED BY**
INITIALS	_____	_____	_____	_____

DATE	_____	_____	_____	_____

HOUSE AND ROOF MATERIAL				
HOUSE MATERIAL:	1. SUN-BURN BRICKS	2. FIRED BRICKS	3. MUD	4. OTHER
ROOF MATERIAL:	1. METAL SHEET/SISAL TILES	2. THATCH	3. OTHER	

OTHER COMMENTS REGARDING VISIT:

MDICP 2006 Survey

(Ever-married women questionnaire)

Survey Continuation Consent

For never-married minors (age < 18):
Ask parents of respondent (INTERVIEWER: CIRCLE response):
We are here to continue the survey that we have begun with your son/daughter a few days ago. We would like to ask him/her some additional questions about his/her health, socioeconomic situation and family, including questions on some sensitive topics such as his/her sexual behaviors, perceptions of HIV risks and strategies for preventing infection with HIV.

Do you allow us to continue our interview with your son/daughter: Yes No

For all respondents, ask the respondent him/herself (INTERVIEWER: CIRCLE response):
We are here to continue the survey that we have begun with you a few days ago. We would like to ask you some additional questions about your health, your socioeconomic situation and your family, including questions on some sensitive topics such as your sexual behaviors, perceptions of HIV risks and strategies for preventing infection with HIV.

Do you allow us to continue our interview with you: Yes No

Proceed to survey if continuation consent is given. If consent is not given, END

INTERVIEWER INSTRUCTIONS:

1. **Do NOT read the categories "don't know" or "do not remember" that are listed on the questionnaire. Mark responses as "don't know" or "do not remember" ONLY if this is the respondent's answer to a question.**

Section 1: Respondent's Background

Now I would like to ask you a few questions about yourself—the languages you speak, your tribe, where you have lived, your siblings and your children

B1	*What languages can you speak well enough to have a conversation?* **(DO NOT READ LIST, MORE THAN ONE ANSWER IS POSSIBLE)**	a) Chichewa ..... 1 b) Tumbuka ..... 1 c) Yao ..... 1 d) English ..... 1 e) Ngoni ..... 1 f) Tonga ..... 1 g) Sena ..... 1 h) Senga ..... 1 i) Other (SPECIFY:_____)1
B2	*What tribe do you belong to?* **(DO NOT READ LIST, ONLY ONE ANSWER IS POSSIBLE)**	Yao ..... 1 Chewa ..... 2 Lomwe ..... 3 Tumbuka ..... 4 Ngoni ..... 5 Sena ..... 6 Tonga ..... 7 Senga ..... 8 Other (SPECIFY:_____) 9
B3	**IF CURRENTLY MARRIED:** *Does your husband usually stay in this village or does he usually stay somewhere else?*	Stays in village ..... 1 Stays somewhere else 0

Next I would like to ask you some questions about your well-being and health.

B4	*I am interested in your general level of well-being or satisfaction with life. How satisfied are you with your life, all things considered?* (**READ RESPONSES)**	Very satisfied ..... 1 Somewhat satisfied ..... 2 Satisfied ..... 3 Somewhat unsatisfied ..... 4 Very unsatisfied 5
B5	*Do you think that you are more, equally or less satisfied than other persons living in this village?* (**READ RESPONSES)**	Much more satisfied ..... 1 More satisfied ..... 2 Equally satisfied ..... 3 Less satisfied ..... 4 Much less satisfied ..... 5 Don't know 99
B6	*In general, would you say your health is…* (**READ RESPONSES)**	Much better ..... 1 Very Good ..... 2 Good ..... 3 Fair ..... 4 Poor ..... 5 Don't know 99
B7	*How would you compare your health today to your health two years ago?* (**READ RESPONSES)**	Much better ..... 1 Better ..... 2 Same ..... 3 Worse ..... 4 Much worse ..... 5 Don't know 99

B8	*How would you compare your health to other people in your village who are of about the same age and sex?* (**READ RESPONSES)**	Much better ..... 1 Better ..... 2 Same ..... 3 Worse ..... 4 Much worse ..... 5 Don't know 99
B9	*Do you have any health problems that limit you in carrying out moderate activities? (For example, cooking and cleaning, walking to meetings in the village, or tending to cattle and livestock. If so, how much?)* (**READ RESPONSES)**	Yes, Limited a Lot ..... 1 Yes, Limited a Little/ Moderately ..... 2 No, Not Limited at all 3
B10	*Do you have any health problems that limit you in carrying out strenuous activities? (For example carrying heavy loads, working on the farm, pounding maize, or digging a pit latrine. If so, how much?)* **(READ RESPONSES)**	Yes, Limited a Lot ..... 1 Yes, Limited a Little/ Moderately ..... 2 No, Not Limited at all 3
B11	*During the past 4 weeks, have you accomplished less than you would like, as a result of your physical health?*	Yes ..... 1 No 0
B12	*During the past 4 weeks, have you been unable to do certain things as a result of your physical health?*	Yes ..... 1 No 0
B13	*During the past 4 weeks, have you accomplished less than you would like, as a result of any emotional problems (such as feeling depressed or anxious)?*	Yes ..... 1 No 0
B14	*During the past 4 weeks, did you do your work or other activities less carefully than usual, as a result of any emotional problems (such as feeling depressed or anxious)?*	Yes ..... 1 No 0
B15	*During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?* **(READ RESPONSES)**	Not at all ..... 1 A little bit ..... 2 Moderately ..... 3 Quite a bit ..... 4 Extremely 5
B16	*How much of the time during the past 4 weeks have you felt calm and peaceful?* **(READ RESPONSES)**	All of the time ..... 1 Most of the time ..... 2 Some of the time ..... 3 A little of the time ..... 4 None of the time 5
B17	*How much of the time during the past 4 weeks did you have a lot of energy?* **(READ RESPONSES)**	All of the time ..... 1 Most of the time ..... 2 Some of the time ..... 3 A little of the time ..... 4 None of the time 5
B18	*How much of the time during the past 4 weeks have you felt downhearted and depressed?* **(READ RESPONSES)**	All of the time ..... 1 Most of the time ..... 2 Some of the time ..... 3 A little of the time ..... 4 None of the time 5
B19	*During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?* **(READ RESPONSES)**	All of the time ..... 1 Most of the time ..... 2 Some of the time ..... 3 A little of the time ..... 4 None of the time 5
B20	*How do you think your health will change during the next 12 months?* **(READ RESPONSES)**	Improve a lot ..... 1 Improve somewhat ..... 2 Stay about the same ..... 3 Worsen somewhat ..... 4 Worsen a lot ..... 5 Don't Know 99

Now I want to ask you some questions about your smoking and drinking habits.

B21	Would you say that: **(READ RESPONSES)**	You smoke..... 1 You used to smoke but don't smoke now .... 2 You have NEVER smoked..... 3
B22	During an average week, would you say that: **(READ RESPONSES)**	You drink 5-7 days in an average week..... 1 You drink 3-4 days in an average week..... 2 You drink 1-2 days in an average week..... 3 You do not drink in an average week ..... 4 You have never drunk alcohol 5

Section 2: Economic Situation

Next, I would like to ask you some questions about the economic situation of your household

E1 *How much land does your household own?*

a) Acres.....[_____]
b) Hectares.....[_____]
c) Football pitches.....[_____]

E2a *Which of the following CASH crops are produced by your household?*

(CIRCLE YES FOR ALL THAT APPLY; IF YES, RECORD AMOUNT AND VALUE.)

E2b *How much of this crop did you produce in the last growing season?*

E2c *What was the value of this crop in the past growing season?*

		Yes	No		
a)	Corn	1	0	_____ # of 50 KG bags	[_____] Kwacha
b)	Tobacco	1	0	_____ KG	[_____] Kwacha
c)	Cotton	1	0	_____ KG	[_____] Kwacha
d)	Other cash crop	1	0	_____ KG	[_____] Kwacha
	Specify (_____)				

E2d *Which of the following other crops does your household produce?***?**

		Yes	No
a)	Millet	1	0
b)	Sweet Potatoes.....	1	0
c)	Sugar Cane	1	0
d)	Cassava	1	0
e)	Ground nuts	1	0
f)	Soy beans	1	0

As you know, some people take up jobs for which they are paid in cash or kind. Others sell things at the market or have a small business. Others might do ganyu work or work for others.

E3a *Think about all of the work that you have done in the past year in which you have been paid cash or kind. How much do you estimate that you have earned in the past year?*

[_____] Kwacha

E3b *Do you currently have any savings for the future, such as a bank account, savings group, or cash?*

Yes 1
No ..... 0 →E4

E3c *If yes, what is the approximate total amount of all of your savings?*

[_____] Kwacha

E4	*Next, I would like to ask you about purchases that you or your household made in the past 3 months for yourself. How much did you or your household approximately spend in the past 3 months in total on:* a) *Clothes, fabric for clothes, or shoes for.* yourself ..... [_____] Kwacha b) *Medical expenses for yourself, including expenses for traditional healers, traditional medicines, health care at the hospital, doctors or medicines.*..... [_____] Kwacha
E5	*Also, I'd like to ask you about purchases that your household made in the past 3 months. Approximately how much did your household spend in the past 3 months in total on:* a) *Clothes, fabric for clothes, or shoes for your children.* ..... [_____] Kwacha b) *School fees, school materials, or books for your children.* ..... [_____] Kwacha c) *Medical expenses for your children (including traditional medicines).* ..... [_____] Kwacha d) *Fertilizer* ..... [_____] Kwacha e) *Medical expenses for anyone other than you and your children (including traditional medicines).* ..... [_____] Kwacha f) *Seeds for planting.* ..... [_____] Kwacha g) *Hired labor.* ..... [_____] Kwacha h) *New agricultural tools/equipment.* ..... [_____] Kwacha i) *Expenses related to funerals.* ..... [_____] Kwacha

Now I want to ask you some questions about a hypothetical situation. Suppose you have earned 500 Kwacha for work that you have done for a *trustworthy* neighbor during the last week. The neighbor gives you an option for how he pays you for this work. One option is that you get paid today. The alternative option will be to get a slightly higher payment in a month from now.

E6a	*Do you prefer to receive the 500 Kwacha for your work today, or would you prefer 600 Kwacha one month from now?*	500 Kwacha today .....1 600 Kwacha in a month .....2 Don't know 99	**-> M1**
E6b	*Do you prefer to receive the 500 Kwacha for your work today, or would you prefer 750 Kwacha one month from now?*	500 Kwacha today .....1 750 Kwacha in a month .....2 Don't know 99	**-> M1**
E6c	*How much would the neighbor have to pay you one month from today so that you would prefer to be paid in one month rather than receiving 500 Kwacha today?*	[_____] Kwacha Don't know 99	

Section 3: Marriage

Next, I would like to ask you several questions about your marriage and your husband.

M1	*Are you now married or living with a man, or are you now widowed, divorced, or no longer living together?*	Married/living together .....1 Separated .....2 Divorced.....3 Widowed .....4 Never married……5
M2	*How many times have you been married in your lifetime, including your current marriage?*	[_____] Number
M2a	*How many other wives does your husband currently have?*	[_____] Number

INTERVIEWER ASK: "Please tell me the names of ALL men to whom you have been married, starting with your FIRST marriage and ending with your CURRENT and most recent marriage?"

1. **Write the names of all husbands of the respondent in column M3b "Husband Name" below.**
2. **CIRCLE the line number in M3a for the last line on which a name is listed to indicate the *current* or *most recent* marriage.**
3. **Ask the respondent to confirm the list of names in M3b the following way. Check the [__] box after each confirmation question.**
   - a. [__] **So, your first marriage was with** *[NAME ON LINE 01]"So, your first marriage was with [NAME ON LINE 01]?"*
     If no, correct name on LINE 01 in M3b.
   - b. [__] **After [NAME ON LINE 01] you entered a marriage with [[NAME ON LINE 02]"After [NAME ON LINE 01], you entered a marriage with [NAME ON LINE 02]?"**
     If no, correct name on LINE 02 in M3b.
   - c. [__] **Repeat (b) for LINES 03 and onward, always asking "After [NAME ON LINE ABOVE THE CURRENT LINE], you entered a marriage with [NAME ON THE CURRENT LINE]?"**
     If no, correct name on the CURRENT LINE in M3b.
   - d. [__] **For the circled line in M3b, ask: "And your current or most recent marriage is/was with [NAME ON THE CIRCLED]?"**
     If no, correct name on the last line on which a name is listed in M3b.
4. **If there were corrections during the steps a – d above, repeat these steps to confirm the marriage history. Check the [__] box after each confirmation question.**
5. **LINE by LINE, ask questions M3d to M3h.**

M3a	M3b	M3c	M3d	M3e	M3f	M3g
Line no.	**Husband Name**	*In what year did you get married to [NAME]?* 9999 = Don't know	*How many children did you have with [NAME]?* 9999 = Don't know	*Are you still married to [NAME], and if not, how did the marriage end?* 0=still married 1=separated 2=divorced 3=widow **If M3e=0 then skip to M4a**	*In what year did this marriage end?* 9999 = Don't know	*What was the main reason why your marriage with [NAME] ended?* 1=Lack of love 2=Hus unfaithful 3=Hus did not provide 4=Hus married other wife 5=Resp unfaithful 6= suspected Hus to have HIV 7=Widowed 8=Other, specify
01	(=first marriage)					
02						
03						
04						
05						
06						
07						
08						

09						
10						

INTERVIEWER: Write here any additional comments about the main reason of divorce for "7 = Other". Specify to which LINE in **M3a** the comments pertain.

INTERVIEWER:

Fill in the names for M4a as follows.Check the [__] box after each task.

a. [__] **Copy the name of the current or most recent husband from the CIRCLED LINE in M3b to the column "Current/Most Recent Husband" in the below table.**

b. [__] **Copy the name of the previous husband from the line ABOVE THE CIRCLED LINE in M3b to the column "Previous Husband" in the below table.**

c. [__] **Copy the name of the first husband from LINE 01 in M3b to the column "first husband" in the below table.**

d. [__] **Copy the line number in M3a for to each husband listed in M4a**

e. [__] **Copy the names in M4a into the first row of the continuation page of the below table**

Starting with the current/most recent husband, COLUMN by COLUMN ask questions M6a to M15 for the current/most recent, previous and first husband

Question		Response Codes	Current/ most recent husband	Previous spouse	First husband
M4a	**NAME (copy from M3b)**	(record names on line to right)	_____	_____	_____
M4b	**Line Number (copy from M3a)**		[_____]	[_____]	[_____]
M5	*How old were you when you got married to [NAME]?*		[____]	[____]	____]
M6a	*Was [NAME] older or younger than you?*	Older	1	1	1
		About the same age ..... → **M7**	2	2	2
		Younger	3	3	3
M6b	*How many years [OLDER/YOUNGER] was he than you?*	5 years or less	1	1	1
		6-10 years	2	2	2
		11-15 years	3	3	3
		16-20 years	4	4	4
		More than 20 years	5	5	5
		Don't know	99	99	99
M7	*How many other wives did [NAME] already have at the time you got married?*	Write Number	[____]	[____]	[____]
M8a	*During your time together, did he marry additional wife/wives?*	Yes No ..... → **M9**	1 0	1 0	1 0
M8b	*How many additional wives did [NAME] marry during the time that you were*	Write Number	[____]	[____]	[____]

Question		Response Codes	Current/ most recent husband	Previous spouse	First husband
M4a	**NAME (copy from M3b)**	(record names on line to right)	_____	_____	_____
	married?				
M9	*How long did you and [NAME] know each other before you got married or started living together?*	Less than 1 month	1	1	1
		1-6 months	2	2	2
		6-12 months	3	3	3
		1-2 years	4	4	4
		More than 2 years	5	5	5
		More than 10 years	6	6	6
M10	*After you and [NAME] got married, where did you live?*	Husband's village	1	1	1
		Wife's village	2	2	2
		Somewhere else	3	3	3
M11	*What is the highest level of schooling [NAME] had reached when you married each other**?***	Standard (1 to 8) Form (1 to 4) Higher No schooling prior to marriage Don't know	S___ F___ H 0 99	S___ F___ H 0 99	S___ F___ H 0 99
M12a	*Did your husband or his family promise to make a payment to your family when you got married**?***	Yes	1	1	1
		No ..... →**M13**	0	0	0
		Don't know	99	99	99
M12b	*If yes, how much was promised in total?*	a. Kwacha	[_____]	[_____]	[_____]
		b. Cattle	[_____]	[_____]	[_____]
		c. Goats	[_____]	[_____]	[_____]
		d. Poultry	[_____]	[_____]	[_____]
		e. Other (specify on line to right)	[_____]	[_____]	[_____]
M12c	*How much has been paid so far?*	All	1	1	1
		Most	2	2	2
		Some	3	3	3
		None	4	4	4
M13	*Did this marriage involve the mediation of an ankhoswe?*	Yes	1	1	1
		No	0	0	0
M14	*During your time married together, did [NAME] have a girlfriend, or did he have sex with someone else apart from you and his other wife/wives?*	Yes, I know	1	1	1
		Suspect	2	2	2
		Can't know what he does	3	3	3
		Probably not	4	4	4
		No	5	5	5
		Don't know	99	99	99
M15	*During your time together, did you have a boyfriend, or did you have sex with someone other than [NAME]?*	No	0	0	0
		Yes	1	1	1
		Don't remember	99	99	99

After completing questions M5 to M15, go to the previous husband and repeat M5 TO M15.
Go to the next section once you have completed all husbands listed in the above table.

Section 4: Sexual Behaviors

Next, I would like to ask you some questions about your sexual partners. I understand that many people may hesitate to talk about this in a survey, but I want to remind you that all your answers will be confidential, and neither your spouse nor anybody else in your family or village will see the information that you give to me.

S1	*How many people overall have you ever had sex with?*	Number ..... [_____]
S2a	*Did you have sex in the past 12 months?*	Yes..... 1 →**S3** No 0
S2b	**IF CURRENTLY MARRIED ASK:** *So you haven't had sex with your husband in the past 12 months?*	Did NOT have sex with husband ..... 1 → **S4** Had sex with husband..... 2 Refuse to answer..... 99
S3	*How many sexual partners did you have in the past 12 months?*	Number ..... [_____]
S4	**IF CURRENTLY MARRIED ASK:** *About how many partners do you suspect or know your husband has had in the past 12 months, including yourself?*	Number ..... [_____] **if 0 skip to S19a** Don't know..... 99

INTERVIEWER: If respondent is **CURRENTLY MARRIED**, follow instructions A. If respondent is currently NOT married, follow Instructions B. Check the [__] box after each task.

A. For CURRENTLY MARRIED respondents.

a. [__] WRITE the name of the Respondent's current husband in column "Partner #1" in Question S5

b. [__] **READ INTRODUCTION:** "I would like to ask you about additional sexual partners, besides your current husband. I am interested in your 3 most recent sexual partners. All the information that you give me is completely confidential, and neither your husband nor anybody else will see the information you give to me."

c. [__] **ASK:** "Please give me the names of your two most recent partners, other than your current husband, with whom you had a sexual relation. Include any previous husbands if they were among your 3 most recent partners. If you prefer, you can give me a nickname or fictional name for each of these partners".

d. [__] INTERVIEWER: Write the first two names (or fictional names or initials) reported by the respondent into columns for "Partner #2" and "Partner #3" in Question S5.

e. [__] INTERVIEWER: If respondent does not report any additional sexual partners, **PROMPT**: "If you are concerned about confidentiality, I can assure you that the information that our team collects is confidential and your privacy will be protected. Neither your husband nor anybody else in your family or village will see the information that you report to me. If you report about your sexual relations, this will help us to better understand how HIV/AIDS has affected individuals and couples in this region, and how individuals and couples are responding in their sexual behaviors to increased risks of HIV/AIDS infection."

THEN ASK AGAIN: "Hence, please give me the names of the two most recent partners, other than your current husband, with whom you had a sexual relationship during the last 12 months. Include any previous husbands if you had a sexual relation with them during the past 12 months. If you prefer, you can give me a nickname or fictional name for each of these partners".

f. [__] INTERVIEWER: Write any additional names provided in the empty columns "Partner #2" and "Partner #3" in Question S5. If respondent does not report any names, do not prompt further.

g. [__] CONTINUATION PAGE: Copy the names in S5 – in exactly the same order – in the first row of the continuation page of the below table

B. For currently NOT married respondents

a. [__] **READ INTRODUCTION: "I would like to ask you about additional sexual partners. I am interested in your 3 most recent sexual partners. All the information that you give me is completely confidential, and neither your husband nor anybody else will see the information you give to me."**

b. [__] **ASK**: "Please give me the names of your 3 most recent partners with whom you had a sexual relation. Include any previous husbands if they were among your 3 most recent partners. If you prefer, you can give me a nickname or fictional name for each of these partners.

c. [__] **INTERVIEWER:** Write the first three names (or fictional names or initials) reported by the respondent into columns for "Partner #1", "Partner #2" and "Partner #3" in Question S5

d. [__] **INTERVIEWER: If respondent does not report any additional sexual partners, PROMPT: "**If you are concerned about confidentiality, I can assure you that the information that our team collects is confidential and your privacy will be protected. Nobody in your family or village will see the information that you report to me. If you report us about your sexual relations, this will help us to better understand how HIV/AIDS has affected individuals and couples in this region, and how individuals and couples are responding in their sexual behaviors to increased risks of HIV/AIDS infection."

e. [__] **INTERVIEWER:** "Hence, please give me the names of the three most recent partners with whom you had a sexual relationship during the last 12 months. Include any previous husbands if you had a sexual relation with them during the past 12 months. If you prefer, you can give me a nickname or fictional name for each of these partners".

f. [__] **CONTINUATION PAGE: Copy the names in S5 – in exactly the same order – in the first row of the continuation page of the below table**

Question		**Response Codes**	**Partner #1** (MOST RECENT)	**Partner #2** (2ND MOST RECENT)	**Partner #3** (3RD MOST RECENT)
S5	**NAME**	(record names given by Respondent)			
S6	*What type of relationship did you have with [NAME]?*	Current Husband	1	1	1
		Previous Husband	2	2	2
		Live-in partner..... → **S7**	3	3	3
		Steady boyfriend/fiancé ..... → **S7**	4	4	4
		Infrequent partner ..... → **S7**	5	5	5
		Afisi (Hyena) ..... → **S7**	6	6	6
		One-night stand/hit-run ..... → **S7**	7	7	7
		Client..... → **S7**	8	8	8
		Other: SPECIFY:..... → **S7**	9 [_____]	9 [_____]	9 [_____]
S6b	**INTERVIEWER: If [NAME] is a current or previous HUSBAND (Code in S6 = 1 or 2): Go back to question M3 and record the line number of [NAME] in question M3a**	**Line number from M3a**	[_____]	[_____]	[_____]
S7	*When did your relationship with [NAME] begin?*	Last month	1	1	1
		Last 6 months	2	2	2
		Last year	3	3	3
		More than a year ago	4	4	4

Question		Response Codes	Partner #1 (MOST RECENT)	Partner #2 (2ND MOST RECENT)	Partner #3 (3RD MOST RECENT)
S5	**NAME**	(record names given by Respondent)			
		Don't remember	99	99	99
S8	*Have you ever talked with [NAME] about the risk of HIV?*	Yes	1	1	1
		No	0	0	0
		Don't remember	99	99	99
S9	*When you began your relationship with [NAME], what do you think was the likelihood [NAME] was infected with HIV?*	No likelihood	0	0	0
		Low	1	1	1
		Medium	2	2	2
		High	3	3	3
		Don't know	99	99	99
S10	*Have you ever used a condom with [NAME]? If so, how often did you use a condom with [NAME]?*	Never ..... → **S12**	0	0	0
		At the beginning	1	1	1
		Sometimes	2	2	2
		Almost every time	3	3	3
		Every time	4	4	4
		Don't remember	99	99	99
S11	*When you used a condom, was it usually you or [NAME] who suggest it**?***	Respondent's idea	1	1	1
		Partner's idea	2	2	2
		Other person's idea	3	3	3
S12	*Are you still in a sexual relationship with [NAME]?*	No	0	0	0
		Yes	1	1	1
S12a	**If YES in S12:** *What is the likelihood that [NAME] is currently infected with HIV?* **If NO in S12:** *What is the likelihood [NAME] was infected with HIV when your relationship with him ended?*	No likelihood	0	0	0
		Low	1	1	1
		Medium	2	2	2
		High	3	3	3
		Don't know	99	99	99
S12b	*In general, how frequently did you have sex with [NAME]?*	4 or more times per week	1	1	1
		1-3 times per week	2	2	2
		A couple of times per month	3	3	3
		Less than twice per month	4	4	4
		Don't remember / Don't know	99	99	99

Question		Response Codes	Partner #1 (MOST RECENT)	Partner #2 (2ND MOST RECENT)	Partner #3 (3RD MOST RECENT)
S5	**NAME**	(record names given by Respondent)			
If [NAME] is the current or a previous husband, SKIP to S14					
S12c	*Compared to you, how old is [NAME]?*	More than 5 years younger	1	1	1
		Between 1 and 5 years younger	2	2	2
		About the same age	3	3	3
		Between 1 and 5 years older	4	4	4
		More than five years older	5	5	5
		Don't remember	99	99	99
S12d	*Where was [NAME] usually living while you were in a relationship?*	In this village	1	1	1
		In a neighbouring village **(specify**)	2 [_____]	2 [_____]	2 [_____]
		Elsewhere in this TA **(specify)**	3 [_____]	3 [_____]	3 [_____]
		In town/city**(Specify)**	4 [_____]	4 [_____]	4 [_____]
		Elsewhere**(Specify)**	5 [_____]	5 [_____]	5 [_____]
		Don't know	99	99	99
S12e	*How long did your relationship with [NAME] last?*	One night stand	1	1	1
		Less than a month	2	2	2
		Between 1 to 6 months	3	3	3
		About one year	4	4	4
		More than one year	5	5	5
		Relationship is still ongoing	6	6	6
		Don't remember	99	99	99
S13a	*Did [NAME] ever give you any gift?*	No .....→ **S13c**	0	0	0
		Yes	1	1	1
		Don't remember	99	99	99
S13b	**IF YES:** *Try to estimate the approximate value in Kwacha of the gifts that [NAME] usually gave you during one month's time?*	Write value in Kwacha	[____]	[____]	[____]
S13c	*Did [NAME] ever give you any money? I mean either when you had sex or just anytime*	No .....→ **S14**	0	0	0
		Yes	1	1	1
		Don't remember / Don't know	99	99	99

Question		Response Codes	Partner #1 (MOST RECENT)	Partner #2 (2ND MOST RECENT)	Partner #3 (3RD MOST RECENT)
S5	**NAME**	(record names given by Respondent)			
S13d	**If YES:** *What was the approximate amount in Kwacha that [NAME] usually gave you during one month's time?*	Write value in Kwacha	[____]	[____]	[____]
S14	*Do you think [NAME] had other sexual partners during the time you were in a sexual relationship with him?*	No	0	0	0
		Yes	1	1	1
		Don't know	99	99	99
S15:	*Did you have other sexual partners during the time you were in a sexual relationship with [NAME]?*	No	0	0	0
		Yes	1	1	1
		Don't remember	99	99	99
S16	*What religion is [NAME]?*	No religion **skip → next network partner S5** No religion .....0 Catholic .....1 Quadiriya Muslim.....2 Sukutu Muslim.....3 CCAP .....4 Baptist .....5 Anglican.....6 Pentecostal.....7 Seventh Day Adventist .....8 Jehovah's Witnesses.....9 Church of Christ.....10 Indigenous Christian / AIC.....11 Other (specify_____).....12	0 1 2 3 4 5 6 7 8 9 10 11 12	0 1 2 3 4 5 6 7 8 9 10 11 12	0 1 2 3 4 5 6 7 8 9 10 11 12
S17	*Does [NAME] attend the same church/ mosque that you are part of?*	Yes .....→ **S19**	1	1	1
		No	0	0	0
		Don't know	99	99	99
S18	*Can you tell me the name of the church/mosque [NAME] attends?*	Name: 99 = Don't know	____	____	____

IF THE RESPONDENT HAS REPORTED MORE THAN ONE PARTNER IN S5, RETURN TO S6 AND ASK THE QUESTIONS S6-S18 ABOUT THE OTHER PARTNER(S).

S19a	*How about your best female married friend. Has she had sex with anyone other than her husband in the last year?*	Yes ..... 1 Suspects ..... 2 No ..... 3 →**A1** Don't know ..... 99 →**A1**
S19b	*How many men other than her husband do you think she has slept with in the last 12 months?*	Number ..... [_____] Don't know 99
S19c	*How do you know she had these partners?*	She told me ..... 1 Saw her coming & going ..... 2 Rumours/other people told me 3
S19d	*How many people has she ever had sex with in her lifetime?*	Number ..... [_____] Many, but don't know exact number ..... 88 Don't know 99

Section 5: AIDS

"As you know, many people in Malawi today are concerned about HIV/AIDS. I am now going to ask you some questions about this disease. HIV and AIDS refer to the same illness. The difference is that HIV refers to the early stages of the disease (when people can still look healthy) and AIDS refers to the advanced stages. I'll begin with some general questions."

A1	*How worried are you that you might catch HIV/AIDS?*	Not worried at all ..... 1 Worried a little ..... 2 Worried a lot ..... 3 Don't know 99
A2	*Women can become infected with HIV/AIDS in a number of ways. Out of the following list, which one are you <u>most worried</u> about for yourself?* **(READ LIST – ONLY ONE ANSWER IS POSSIBLE)**	Spouse ..... 1 Other sexual partners ..... 2 Rape ..... 3 Needle / injections ..... 4 Transfusions ..... 5 Other (SPECIFY:_____) ..... 6 Don't know 99
A3	*How many people known to you do you suspect have died from AIDS overall?* **PEOPLE MAY NOT BE SURE, BUT ASK THEM TO JUST GUESS.**	Number ..... [_____] **if 0 → A4** Don't know 99
A3a	*How many of them have usually lived in this village prior to their death?*	Number ..... [_____] Don't know 99
A4	*Overall, how many people known to you do you suspect have died from AIDS in the past 12 months?*	Number ..... [_____] Don't know 99
A5	*How many people known to you do you suspect are sick with AIDS now?*	Number ..... [_____] Don't know 99
A6	*How many of your relatives do some people say have died or are sick with AIDS now?*	Number ..... [_____] Several, but unable to estimate number .... 88 Don't know 99

A7	*In your opinion, what is the likelihood (chance) that you are infected with HIV/AIDS now*?	No likelihood ..... 0 Low ..... 1 Medium ..... 2 High ..... 3 Don't know 99
A8	*In your opinion, what is the likelihood (chance) that you will become infected with HIV/AIDS in the future?*	No likelihood ..... 0 Low ..... 1 Medium ..... 2 High ..... 3 Don't know 99
A9a	*If we took a group of 10 people from this area—just normal people who you found working in the fields or in homes—how many of them do you think would now have HIV/AIDS?*	Number ..... [_____] Don't know 999
A9b	*If we come back after 5 years and take another group of 10 people doing the same sort of daily activities, how many of them do you think would have HIV/AIDS?*	Number ..... [_____] Don't know 999
A10	*If you have unprotected sex only one time with a person infected with HIV/AIDS, what do you think are the chances that you will get HIV/AIDS from him?*	None ..... 0 Low ..... 1 High ..... 2 Certain ..... 3 Don't know 99
A11	*What do you think are the best ways to protect yourself from getting AIDS?* **(DO NOT READ LIST - MORE THAN ONE ANSWER IS POSSIBLE – CIRCLE ALL THAT APPLY)** **INTERVIEWER:** prompt respondent if answers only "uses condoms" or "avoid sex" without specifying in what context or with whom. Try to get respondent to specify with whom their replies apply. If answers apply to more than one category, circle all that apply.	a) Advise spouse to take care ..... 1 b) Prayer can protect ..... 1 c) In God's hands ..... 1 d) Traditional medicine ..... 1 e) Use condoms with all other partners except spouse ..... 1 f) Use condoms with prostitutes/bargirls .... 1 g) Use condoms with people from town ..... 1 h) Use condoms with people you think might be infected ..... 1 i) Avoid sex with any partners except spouse 1 j) Avoid sex with prostitutes/bargirls ..... 1 k) Avoid sex with many partners ..... 1 l) Avoid sex with people from town ..... 1 m) Avoid sex with people you think might be infected ..... 1 n) Avoid transfusions/ injections/sharing razor blades ..... 1 o) Abstinence ..... 1 p) Using charms/traditional rituals ..... 1 q) Other ..... 1 (SPECIFY: _____) r) Don't know ..... 1 s) No ways to protect 1
A12	*Have you <u>ever</u> seen or heard about voluntary testing and counseling (VCT)? That is the medical test to detect HIV with a counseling session to learn the results of the test.*	Yes ..... 1 No ..... 0 Don't know 99
A13	*Have you <u>ever</u> seen or heard about antiretroviral treatment (ARV), that is, the medicine that is given to people with AIDS at the hospital?*	No ..... 0 Yes ..... 1 Don't know 99

A14	*Do you believe that ARVs can cure AIDS?*	Yes.....1 No.....0 Don't know.....99
A15a	*Do you know any people that are currently being treated with ARV?*	Yes.....1 No.....0 ... → **A16** Don't know.....99
A15b	*How do you know about this?* **(READ LIST – MORE THAN ONE ANSWER IS POSSIBLE – CIRCLE ALL THAT APPLY)**	**Yes** **No** a) Was told directly by someone who is treated with ARVs.....1 0 b) Was told by a caretaker or "buddy" of a person who is treated with ARVs.....1 0 c) Heard from someone else.....1 0 d) Other (SPECIFY:_____).1 0
A16	*Do you think it is acceptable to use a condom with a spouse to protect against HIV/AIDS?*	Yes.....1 → **A17** No.....0 Don't know.....99
A16a	*How about when the one spouse suspects or knows that the other might have HIV/AIDS: is it acceptable to use a condom in that situation?*	Yes.....1 No.....0 Don't know.....99
A17	*If you found out that you were infected with HIV/AIDS, would you tell your spouse/regular partner?*	Yes.....1 → **A19a** No.....0 Don't know.....99
A18	*Why would you not tell him?* **(DO NOT READ LIST – MORE THAN ONE ANSWER IS POSSIBLE – CIRCLE ALL THAT APPLY)**	a) Don't want to upset partner.....1 b) Afraid to lose him emotionally.....1 c) Afraid to lose him physically.....1 d) Everybody would know.....1 e) None of his business.....1 f) Other (SPECIFY):_____)..1
A19a	*Have you ever been tested for HIV?*	Yes.....1 No.....0 → **A20**
A19b	*Did you learn the results of the test?*	Yes.....1 No.....0 → **A20**
A19c	*After learning your HIV test result, did you personally make any changes to your sexual behavior to avoid getting HIV/AIDS or giving it to someone else?*	Yes.....1 No.....0 → **A19e** Refuse to answer.....88 → **A19e**

A19d *What changes have you made?* **(DO NOT READ LIST – MORE THAN ONE ANSWER POSSIBLE – CIRCLE ALL THAT APPLY)**	a) Abstaining ..... 1 b) Only sleep with spouse/partner ..... 1 c) Use condoms ..... 1 d) Slept with fewer partners ..... 1 e) Became more selective about sexual partners ..... 1 f) Ended risky relationship/divorce ..... 1 g) Got married ..... 1 h) Other ..... 1 Specify [_____]
A19e *Who did you share your results with?* **(DO NOT READ LIST – MORE THAN ONE ANSWER IS POSSIBLE – CIRCLE ALL THAT APPLY)**	a) Spouse ..... 1 b) Other sexual partner(s) ..... 1 c) Relative ..... 1 d) Friend ..... 1 e) Doctor/traditional healer ..... 1 f) Other, ... 1 Specify: [_____] g) Nobody 1
A20a *How many persons do you know have been tested for HIV and have received their results?*	Number: _____
A20b *Among these, how many people have told you their HIV results?*	Number: _____
A21a *Has your spouse/regular partner ever been tested for HIV/AIDS?*	Yes ..... 1 No ..... 0 → **A22a** Don't know ..... 99 → **A22a**
A21b *Did your spouse/regular partner share his HIV test results with any other person, including yourself?* **(DO NOT READ LIST – MORE THAN ONE ANSWER IS POSSIBLE – CIRCLE ALL THAT APPLY)**	a) You (respondent) ..... 1 b) Told other spouse(s) ..... 1 c) Told other sexual partner(s) ..... 1 d) Told relatives ..... 1 e) Told Friends ..... 1 f) Told Doctor/traditional healer ..... 1 g) Told Other(s) ..... 1 Specify [_____] h) Didn't tell anybody ..... 1 i) Don't know 1
A22a *If you were offered a free HIV test in your home, would you accept the test?*	Yes ..... 1 No ..... 0 → **A23a** Don't know 99
A22b *If you were given the option, would you want to know the results of this HIV test immediately at your home?*	Yes ..... 1 → **A23a** No ..... 0 Don't know 99
A22c *Why not?*	Scared to know HIV status ..... 1 Certain to have HIV already ..... 2 Certain not to have HIV ..... 3 Already tested and know result ..... 4 Confidentiality concerns ..... 5 Other (SPECIFY:_____) 6

Next, I'd like to ask you some questions about people you've chatted with about AIDS

A23a *How many people have you chatted with about AIDS? I mean people other than your husband or partner.* **IF LESS THAN FOUR ARE NAMED, PROBE**: "Can you think of anyone else? How about sitting in on a conversation, even if you yourself didn't say anything?"	Total number named ..... [_____] **If none are named <u>after probing</u>, skip to A39a**
A23b *Could you please give me the names of four of these? As I said earlier, this information will be completely confidential. You can also make up names, if you feel more comfortable.* **WRITE THE FOUR NAMES, AND START ASKING THE QUESTIONS BELOW FOR EACH PARTNER NAMED ON THE RIGHT**	NAME: #1. _____ #2. _____ #3. _____ #4. _____

Fill in the names for A24 as follows. Check the [__] box after each task.

a. [__] Copy the first name listed on LINE #1 in A23b to column "NWP #1" in Question A24

b. [__] Copy the names on LINES #2, #3 and #4 in A23b to columns "NWP #2", "NWP #3", "NWP #4" in Question A24

c. [__] Copy the names in A24 to the first row of the continuation pages of the below table with questions A24a to A38d Keep the same sequence of names.

Starting with NWP#1, <u>column by column</u>, ask questions A24a to A38d for the persons listed under NWP#1, NWP#2, NWP#3 and NPW#4

Question	Code	NWP #1	NWP #2	NWP #3	NWP #4
A24 NAME (copy name from A23b)					
A24a Is [NAME] male or female?	Male	1	1	1	1
	Female	2	2	2	2
A25 *What is your relationship to [NAME]?* **CODES:** 1 = friend **MALE RELATIVE:** 2 = father 3 = brother 4 = father-in-law 5 = brother-in-law/ brother in marriage 6 = other male relative **FEMALE RELATIVE:** 7 = mother 8 = sister 9 = co-wife 10 = sister-in law/ sister in marriage 11 = mother-in-law 12 = other female relative **OTHER:** 13=acquaintance/workmate 14=family planning CBD 15=nurse/doctor/HSA 16=religious leader 17=other: (SPECIFY_____)		[____] _____	[____] _____	[____] _____	[____] _____
A26 *Where does [NAME] stay?*	Same household	1	1	1	1
	Same compound	2	2	2	2

Question	Code	NWP #1	NWP #2	NWP #3	NWP #4
A24 NAME (copy name from A23b)					
	Same village	3	3	3	3
	Same TA	4	4	4	4
	Same district	5	5	5	5
	Lilongwe	6	6	6	6
	Blantyre	7	7	7	7
	Mzuzu	8	8	8	8
	Zomba	9	9	9	9
	Somewhere else	10	10	10	10
	Don't know	99	99	99	99
A27 *How intimate is [NAME] to you? (acquaintance, just a friend, confidant)*	Confidant	1	1	1	1
	Just a friend	2	2	2	2
	An acquaintance	3	3	3	3
	Met once or twice	4	4	4	4
A28 *How much schooling does [NAME] have?* **Circle highest completed level and record # of years at this level.**	Standard (1 to 8)	S___	S___	S___	S___
	Form (1 to 4)	F___	F___	F___	F___
	Higher	H	H	H	H
	None	0	0	0	0
	Don't know	99	99	99	99
A29a *How often do you speak with [NAME] about AIDS?*	Daily	1	1	1	1
	Few times a week	2	2	2	2
	Few times a month	3	3	3	3
	Seldom	4	4	4	4
A30 *What does [Name] think are the best ways to protect himself / herself from getting AIDS?* (**DO NOT READ LIST - MORE THAN ONE ANSWER IS POSSIBLE)** **INTERVIEWER:** prompt respondent if answers only "uses condoms" or "avoid sex" without specifying in what context or with whom. Try to get respondent to specify with whom their replies apply. If answers apply to more than one category, circle all that apply.	A. Advise spouse to take care	A	A	A	A
	B. Prayer can protect	B	B	B	B
	C. In God's hands	C	C	C	C
	D. Traditional medicine	D	D	D	D
	E. Use condoms with all other partners except spouse	E	E	E	E
	F. Use condoms with prostitutes/bargirls	F	F	F	F
	G. Use condoms with people from town	G	G	G	G
	H. Use condoms with people you think might be infected	H	H	H	H
	I. Avoid sex with any partners except spouse	I	I	I	I
	J. Avoid sex with prostitutes/bargirls	J	J	J	J
	K. Avoid sex with many partners	K	K	K	K
	L. Avoid sex with people from town	L	L	L	L
	M. Avoid sex with people you think might be infected	M	M	M	M
	N. Avoid transfusions/injections/sharing razor blades	N	N	N	N
	O. Abstinence	O	O	O	O
	P. Using charms/traditional rituals	P	P	P	P

Question	Code	NWP #1	NWP #2	NWP #3	NWP #4
A24 NAME (copy name from A23b)					
	Q. Other (SPECIFY:_____)	Q _____	Q _____	Q _____	Q _____
	R. Don't know	R	R	R	R
	S. No ways to protect	S	S	S	S
A31a *Have you ever talked with [NAME] about getting tested for HIV?*	Yes	1	1	1	1
	No	0	0	0	0
	Can't remember	99	99	99	99
A31b *Has [NAME] been tested for HIV?*	Yes	1	1	1	1
	No..... **Skip to A31d**	0	0	0	0
	Don't know ..... **Skip to A31d**	99	99	99	99
A31c *Did [NAME] tell you her/his result?*	Yes	1	1	1	1
	No	0	0	0	0
	Don't know	99	99	99	99
A31d *Have you ever talked with [NAME] about ARVs?*	Yes	1	1	1	1
	No	0	0	0	0
	Can't remember	99	99	99	99
A32 *Is [NAME] the best female married friend that you talked to me about earlier?*	Yes..... **Skip to A35**	1	1	1	1
THIS IS THE FRIEND NAMED IN S19a	No	0	0	0	0
A33 *Is [NAME] married?*	Yes	1	1	1	1
	No	0	0	0	0
	Can't remember	99	99	99	99
A34 *How many men/women (other than his/her spouse) do you think [NAME] has slept with in the last year?*	NUMBER 99 = Don't know	[____]	[____]	[____]	[____]
A35 *How worried is [NAME] about getting AIDS?*	Not worried at all	1	1	1	1
	Worried a little	2	2	2	2
	Worried a lot	3	3	3	3
	Don't know	99	99	99	99
A36 *How likely do you think that [NAME] is infected with HIV/AIDS now?*	No likelihood	1	1	1	1
	Low	2	2	2	2
	Medium	3	3	3	3
	High	4	4	4	4
	Don't know	99	99	99	99

Question	Code	NWP #1	NWP #2	NWP #3	NWP #4
A24 NAME (copy name from A23b)					
A37 *What religion is [NAME]?*	No religion **skip → next network partner A24**				
	No religion 0	0	0	0	0
	Catholic 1	1	1	1	1
	Quadiriya Muslim..... 2	2	2	2	2
	Sukutu Muslim..... 3	3	3	3	3
	CCAP 4	4	4	4	4
	Baptist 5	5	5	5	5
	Anglican 6	6	6	6	6
	Pentecostal 7	7	7	7	7
	Seventh Day Adventist..... 8	8	8	8	8
	Jehovah's Witnesses..... 9	9	9	9	9
	Church of Christ 10	10	10	10	10
	Indigenous Christian / AIC..... 11	11	11	11	11
	Other (specify_____)..... 12	12	12	12	12
A38a *Does [NAME] attend the same church/mosque that you are part of?*	Yes ..... **→ A38c**	1	1	1	1
	No	0	0	0	0
	Don't know	99	99	99	99
A38b *Can you tell me the name of the church/mosque [NAME] attends?*	Name: 99 = Don't know	**NWP #1** _____	**NWP #2** _____	**NWP#3** _____	**NWP#4** _____
A38c IF [NAME] IS CHRISTIAN: *Does [NAME] consider herself/himself a born again* IF [NAME] IS MUSLIM: *Has [NAME] made Tauba?*	Yes	1	1	1	1
	No	0	0	0	0
	Don't know	99	99	99	99
A38d *Is [NAME] more or less religious than you?*	More religious	3	3	3	3
	Equally religious	2	2	2	2
	Less religious	1	1	1	1
	Don't know	99	99	99	99

NOW RETURN TO A24a AND ASK THE QUESTIONS ABOUT THE NEXT CONVERSATION PARTNER UNTIL YOU FINISH ALL PARTNERS LISTED IN A23b.

If the respondent mentioned less than four conversation partners, probe: "Is there anyone else you have talked to about AIDS that you did not mention before?"

If YES, go back to A23b, write the person's name, and ask the questions about that person from A24a to A38d

INTERVIEWER:

1. **Copy the names of the AIDS conversation partners from A23b to the table below**
2. **Ask: " Finally, I would like briefly to ask you how well all the people you told me you have chatted with about AIDS know each other. For each pair that I mention, please tell me whether they are confidants, just friends, acquaintances, or they do not know each other." RECORD the response in the appropriate cell. Do not write in the shaded area."**

Question	Code	NWP #1	NWP #2	NWP #3	NWP #4
A24 NAME (copy name from A23b)					
1. NAME (from A23)	**2. How much does [NAME] know…**	**NWP #1**	**NWP #2**	**NWP #3**	**NWP #4**
NWP#1: _____	code relationship to…				
NWP#2:_____	code relationship to…				
NWP#3: _____	code relationship to…	**DO NOT WRITE IN**			
NWP#4:_____		**SHADED AREA**			

Relationship **CODE**:
1 = confidants
2 = just friends
3 = acquaintances
4 = don't know each other
5 = don't know between the persons

Next, I would like to ask you a few short questions about condoms.

A39a *In the past 2 months, how many condoms did you buy?*	Number .....[_____] Don't know 99
A39b *In the past 2 months, how many condoms were given to you by others, including your sexual partners?*	Number .....[_____] Don't know 99
A39c *How many condoms do you currently have in your home?*	Number .....[_____] Don't know 99

Section 6: Expectations Questions

INTERVIEWER: Put the plate and the cup side by side. Recount the number of beans and check that you have 10 beans in the cup [__]. As you provide the explanation below, add the beans into the plate to illustrate what you say.

"I will ask you several questions about the chance or likelihood that certain events are going to happen. There are 10 beans in the cup. I would like you to choose some beans out of these 10 beans and put them in the plate to express what you think the likelihood or chance is of a specific event happening. One bean represents one chance out of 10. If you do not put any beans in the plate, it means you are sure that the event will NOT happen. As you add beans, it means that you think the likelihood that the event happens increases. For example, if you put one or two beans, it means you think the event is not likely to happen but it is still possible. If you pick 5 beans, it means that it is just as likely it happens as it does not happen (fifty-fifty). If you pick 6 bins, it means the event is slightly more likely to happen than not to happen. If you put 10 beans in the plate, it means you are sure the event will happen. There is not right or wrong answer, I just want to know what you think.

Let me give you an example. Imagine that we are playing Bawo. Say, when asked about the chance that you will win, you put 7 beans in the plate. This means that you believe you would win 7 out of 10 games on average if we play for a long time.

INTERVIEWER: Report for each question the NUMBER OF BEANS put in the PLATE. After each question, replace the beans in the cup (unless otherwise noted).

For questions X1a to X1f: If respondent puts 10 (or 0) beans, prompt "Are you sure that this event will almost surely (not) happen?" CIRCLE 1 in column P if you <u>prompted</u> the respondent, and report the final answer only.

X1	Pick the number of beans that reflects how likely you think it is that…	# of beans in plate	Prompt for 0 or 10?
a)	*you will win if we play a game of Bawo after this interview*	[_____]	1
b)	*a baby born in your community this month will die within one year*	[_____]	1
c)	*you will go to the market at least once <u>within the next 2 days</u>* (LEAVE BEANS IN PLATE)	[_____]	1
d)	*you will go to the market at least once <u>within the next 2 weeks</u>?*	[_____]	1
INTERVIEWER: Did Respondent add any beans between X1c and X1d?		**If yes → X1f**	
e)	*Remember, as time goes by, you may find more time to go to the market. Therefore, you should have added beans to the plate. Let me ask you again. Now, add beans in the plate so that the number of beans in the plate reflects how likely you think it is that you will go the market at least once <u>within 2 weeks</u>?*	[_____]	1
f)	*you will experience shortage of food in the next 12 months?*	[_____]	1

<u>For the subsequent questions, no longer prompt for "0" and "10" answers</u>

X2	Pick the number of beans that reflects how likely you think it is that…	# of beans in plate
a)	*you will have to rely on family members for financial assistance in the next 12 months*	[_____]
b)	*you are infected with HIV/AIDS now*	[_____]
<u>FOR MARRIED RESPONDENTS</u> (INTERVIEWER: If respondent is not married → X2f)		
c)	*your spouse is infected with HIV/AIDS now*	[_____]
d)	*you will use condom the next time you have sex with your spouse*	[_____]
e)	*you will use condom the next time you have sex with someone else other than your spouse* j) .....**(INTERVIEWER: If sex only with spouse, write 99)**	[_____] **→ X3**
<u>FOR UNMARRIED RESPONDENTS</u>		
f)	*your romantic partner is infected with HIV/AIDS now* k) .....**(INTERVIEWER: If no romantic partner, write 99 and → X2h)**	[_____]
g)	*you will use condom the next time you have sex with your romantic partner* **(INTERVIEWER: if no romantic partner, write 99)**	[_____]
h)	*you will use condom the next time you have sex with someone you just met* l) .....**(INTERVIEWER: If no sex with someone just met, write 99)**	[_____]
i)	*you will be married one year from now*	[_____]

FOR BOTH MARRIED AND UNMARRIED RESPONDENTS		
X3	***Consider a healthy woman in your village who currently does not have HIV. Pick the number of beans that reflects how likely you think it is that she will become infected with HIV …***	**# of beans in plate**
	a) during a single intercourse without a condom with someone who has HIV/AIDS	[_____]
	b) *within the next 12 months (with normal sexual behavior)*	[_____]
	c) within the next 12 months if she is married to someone who is infected with HIV/AIDS	[_____]
	d) within the next 12 months if she has several sexual partners in addition to her spouse	[_____]
	e) *what about if this woman we just spoke about [in X3d] uses a condom with all extra-marital partners? How many beans would you leave on the plate?*	[_____]

Next, I would like you to consider the likelihood that somebody dies as time goes by. This is an imaginary person, and I am going to describe her to you. The beans in the plate represent the chances out of 10 that the person dies within a certain time period. The person is alive today so we start with an empty plate. As time goes by, more unfortunate things can happen and the person has more chances of dying, so more beans will be added to the plate"

INTERVIEWER:

1. **Ask questions X4 to X5b for the INDIVIDUAL described in Column A. After X4 and X5a, LEAVE beans in plate. After X5b, put beans back in the cup. RECORD the number of beans in the plate after each question.**
2. **COLUMN by COLUMN, REPEAT questions X4 to X5b for the INDIVIDUALS described in Columns B, C and D. For each individual, LEAVE the beans in the plate after X4 and X5a, and put beans back in the cup after X5b. RECORD the number of beans in the plate after each question.**
3. **If respondent says "I Don't Know", probe with examples: "someone might die because of old age, disease, car accident. How likely do you think it is any of those things happen within [*for X4*: 1 year; *for X5a:* 5 years; *for X5b:* 10 years]?**

	RECORD the number of beans in the plate for each question.	**DESCRIPTION OF INDIVIDUAL**	
		A *A woman your age who is healthy and does not have HIV*	**B** *A woman your age who is infected with HIV*
X4	*Pick the number of beans that reflects how likely you think it is that [INDIVIDUAL] will die within a <u>one-year</u> period beginning today* . **(LEAVE BEANS ON PLATE)**	[_____] Beans in plate **If 10, → X4 for individual B**	[_____] Beans in plate **If 10, →X4 for individual C**
X5	**Add additional beans so that the number of beans in the plate reflects how likely you think it is that [INDIVIDUAL]** a) *will die within a <u>five-year</u> period beginning today* m)..... **(LEAVE BEANS ON PLATE; IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS)**	[_____] Beans in plate **If 10, → X4 for individual B**	[_____] Beans in plate **If 10, →X4 for individual C**

b) *will die within a <u>ten-year</u> period beginning today* n)..... o).....**(IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS. PUT BEANS BACK IN CUP AFTER RECORDING THE ANSWER)**	[_____] Beans in plate → **X4 for individual B**	[_____] Beans in plate → **X4 for individual C**

		C *A woman your age who is sick with AIDS*	**D** *A woman your age who is sick with AIDS and is treated with ARV* **If R does not know about ARV, skip and go to X6**
X4	*Pick the number of beans that reflects how likely you think it is that [INDIVIDUAL] will die within a <u>one-year</u> period beginning today.* **(LEAVE BEANS ON PLATE)**	[_____] Beans in plate **If 10, → X4 for individual D**	[_____] Beans in plate **If 10, → X6**
X5	**Add additional beans so that the number of beans in the plate reflects how likely you think it is that [INDIVIDUAL]** **a)** *will die within a <u>five-year</u> period beginning today* p)..... **(LEAVE BEANS ON PLATE; IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS)**	[_____] Beans in plate **If 10, → X4 for individual D**	[_____] Beans in plate **If 10, → X6**
	b) *will die within a <u>ten-year</u> period beginning today* q)..... **(IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS. PUT BEANS BACK IN CUP AFTER RECORDING THE ANSWER)**	[_____] Beans in plate → **X4 for individual D**	[_____] Beans in plate → **X6**

Finally, I would like to ask you to consider the likelihood that <u>you</u> may not be alive as time goes by. We hope that nothing bad will happen to you, but nevertheless, something unfortunate may occur over the next years despite all precautions that you may take. If you don't want to, you do not need to answer this question.

INTERVIEWER: If respondent refuses to answer, skip to **X8: Time and Risk Preferences.**

		# OF BEANS in plate
X6	*Pick the number of beans that reflects how likely you think it is that you will die within a <u>one-year</u> period beginning today.* **(LEAVE BEANS ON PLATE)**	[_____] **if 10 →X8**
X7	**Put additional beans so that the number of beans in the plate reflects how likely you think it is that <u>you</u>…** **a)** *will die within a <u>five-year</u> period beginning today* r)..... **(LEAVE BEANS ON PLATE; IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS)**	[_____] **if 10 → X8**

	b) *will die within a <u>ten-year</u> period beginning today* s) ..... **(IT IS POSSIBLE TO ADD ZERO ADDITIONAL BEANS. PUT BEANS BACK IN CUP AFTER RECORDING THE ANSWER)**	[____]

X8 *Next, I would like to ask you a few questions about what you expect in the future. I know that nobody knows for sure what the future may bring, but lets just talk about your best guess*

In the next 2 years do you plan on:

		Yes	**No**
a)	*making large repairs or addition on your home*?	1	0
b)	*starting a new business*	1	0
c)	opening *a bank account*.....	1	0
d)	*purchasing (more) land?*	1	0
e)	*sending a child or grandchild to secondary school or university*	1	0
f)	*saving money*.....	1	0

Section 7: Time and Risk Preferences

Next, I would like to ask you some questions about your preferences in monetary matters. These are purely hypothetical questions, and there are no right or wrong answers. Please try to answer these questions as if you were actually facing this situation in real life.

For the next three questions, suppose that you have won 1,000 Kwacha in a lottery. I am interested in whether

- *You would prefer these 1,000 Kwacha that you would get for sure, OR whether*
- *You would take the 50-50 chance to double your money, in which case you have a 50-50 chance to receive more than the original 1,000 Kwacha, and a 50-50 chance to receive less then your original K1,000.*

RP1	*Suppose that you won K1000. You could keep the K1000 or take a 50-50 chance to double the money to K2000 but also a 50-50 chance to reduce the money to K667. Would you rather have:* **[READ RESPONSES]**	K1,000 for sure……1 50-50 chance for K2,000 and 50-50 chance for K667….2
RP2	*Suppose you get a 50-50 chance to double the money to K2000 but a 50-50 chance to reduce the money to K250. Would you rather have:* [**READ RESPONSES]**	K1,000 for sure……1 50-50 chance for K2,000 and 50-50 chance for K250…2
RP3	*Suppose you get a 50-50 chance to double the money to K2000 but a 50-50 chance to reduce the money to K900. Would you rather have:* [**READ RESPONSES]**	K1,000 for sure……1 50-50 chance for K2,000 and 50-50 chance for K900….2

The next few questions are about receiving money <u>now</u> as compared to receiving money later.

KB1	*Would you prefer 310 Kwacha now or 850 Kwacha in 1 week?*	**310 Kwacha now**..... 1 **850 Kwacha in 1 week**..... **2**
KB2	*Would you prefer 780 Kwacha now or 800 Kwacha in 5 months?*	**780 Kwacha now** ..... **1** **800 Kwacha in 5 months**..... **2**
KB3	*Would you prefer 540 Kwacha now or 800 Kwacha in 1 month?*	**540 Kwacha now**..... **1** **800 Kwacha in 1 month**..... **2**
KB4	*Would you prefer 670 Kwacha now or 750 Kwacha in 4 months?*	**670 Kwacha now**..... **1** **750 Kwacha in 4 months**..... **2**
KB5	*Would you prefer 550 Kwacha now or 750 Kwacha in 2 months?*	**550 Kwacha now**..... **1** **750 Kwacha in 2 months**.....**2**
KB6	*Would you prefer 690 Kwacha now or 850 Kwacha in 3 months?*	**690 Kwacha now**.....**1** **850 Kwacha in 3 months**.....**2**
KB7	*Would you prefer 410 Kwacha now or 750 Kwacha in 3 weeks?*	**410 Kwacha now**.....**1** **750 Kwacha K750 in 3 weeks** **2**
KB8	*Would you prefer 800 Kwacha now or 850 Kwacha in 5 months?*	**800 Kwacha now**.....**1** **850 Kwacha in 5 months**.....**2**
KB9	*Would you prefer 330 Kwacha now or 800 Kwacha in 2 weeks?*	**330 Kwacha now**.....**1** **800 Kwacha in 2 weeks**.....**2**

Next, I am going to ask you the same questions again, with one important difference. I will no longer ask you about receiving money now compared with receiving money later. Instead, I will ask you about receiving money <u>2 months from now</u> compared with receiving money at a time <u>more than 2 months from now</u>.

KD1	*Would you prefer 310 Kwacha in 2 months or 850 Kwacha in 2 months plus 1 week?*	***310 Kwacha in 2 months*****.....*1*** ***850 Kwacha in 2 months plus 1 week*****.....*2***
KD2	*Would you prefer 780 Kwacha in 2 months or 800 Kwacha in 7 months?*	***780 Kwacha in 2 months*****.....*1*** ***800 Kwacha in 7 months*****.....*2***
KD3	*Would you prefer 540 Kwacha in 2 months or 800 Kwacha in 3 months?*	***540 Kwacha in 2 months*****.....*1*** ***800 Kwacha in 3 months*****.....*2***
KD4	*Would you prefer 670 Kwacha in 2 months or 750 Kwacha in 6 months?*	***670 Kwacha in 2 months*****.....*1*** ***750 Kwacha in 6 months*****.....*2***
KD5	*Would you prefer 550 Kwacha in 2 months or 750 Kwacha in 4 months?*	***550 Kwacha in 2 months*****.....*1*** ***750 Kwacha in 4 months*****.....*2***
KD6	*Would you prefer 690 Kwacha in 2 months or 850 Kwacha in 5 months?*	***690 Kwacha in 2 months*****.....*1*** ***850 Kwacha in 5 months*****.....*2***
KD7	*Would you prefer 410 Kwacha in 2 months or 750 Kwacha in 2 months plus 3 weeks?*	***410 Kwacha in 2 months*****.....*1*** ***750 Kwacha in 2 months plus 3 weeks*****.....*2***
KD8	*Would you prefer 800 Kwacha in 2 months or 850 Kwacha in 7 months?*	***800 Kwacha in 2 months*****.....*1*** ***850 Kwacha in 7 months*****.....*2***
KD9	*Would you prefer 330 Kwacha in 2 months or 800 Kwacha in 2 months plus 2 weeks?*	***330 Kwacha in 2 months*****.....*1*** ***800 Kwacha in 2 months plus 2 weeks*****.....*2***

Section 8: Religion

Next, I would like to ask you some questions about your current religion and religious practices.

R1a	*What is the name of the church/mosque that you usually attend?*	Name..... _____ Never attended..... 1 → **R**
R1b	*In what year did you begin to attend this church/mosque***?**	Year..... [_____] Since birth 8888
R2a	*Is this church/mosque located in this village?*	Yes ..... 1 → **R** No..... 0 Don't know..... 99
R2b	**[If not],** *in what village or near what village is this church/mosque located?*	Village name..... _____

R3	*What is the name of the leader of your church/mosque (pastor, imam, m'baremkulu)*?	Name..... _____ Has no leader..... 88 Don't know/Can't remember..... 99
R4:	**INTERVIEWER: circle religion code; if unclear from R2, ask** *What religion are you?*	No religion ..... 0 Catholic ..... 1 Quadiriya Muslim..... 2 Sukutu Muslim..... 3 CCAP ..... 4 Baptist ..... 5 Anglican..... 6 Pentecostal..... 7 Seventh Day Adventist ..... 8 Jehovah's Witnesses..... 9 Church of Christ ..... 10 Indigenous Christian / AIC..... 11 Other (specify_____)..... 12
R5	*Did you ever belong to a different religion, denomination, or congregation than the one you currently belong to, at any time in your life?*	No..... 0 →**R1** Yes 1

INTERVIEWER:

1. **R6: Ask: "Would you tell me the names of these other religions/ denominations/ congregations? I would like you to start with your current religion/denomination/congregation, and then list the one you belonged to before your current religion, then the one before that, and so on".**
2. **Write the names of all religions named by the respondents on lines 1 – 5 in column R6 of the below table; If in R6 the respondent indicated more than 5 religions/denominations/congregations, record only the 5 most recent ones in the below table.**
3. **LINE by LINE, ask questions R7 – R10 for each religion/denomination/congregation in the below table. Skip R9 and R10 for the religion listed on the first line.**

	R6	R7	R8	R9	R10
	Religion/ Denomination/ Congregation	**Age Joined**	**Current Member**	**Age Switched**	**Reason for Switching**
		Record age; 88 = since birth Prompt for approximate age if Resp does not know; 99 = can't remember	if 'yes' strike out remainder of the line and skip R9-R10 0 = no 1 = yes	Record age; prompt for approximate age if Resp does not know; 99 = can't remember **[NAME ON THE CURRENT LINE] to [NAME ON THE NEXT LINE**	(do not read list – circle all responses given by respondent; more than one answer possible) probe for any other reason **[NAME ON THE CURRENT LINE] to [NAME ON THE NEXT LINE]?**
1					

	R6	R7	R8	R9	R10
	Religion/ Denomination/ Congregation	**Age Joined**	**Current Member**	**Age Switched**	**Reason for Switching**
		Record age; 88 = since birth Prompt for approximate age if Resp does not know; 99 = can't remember	if 'yes' strike out remainder of the line and skip R9-R10 0 = no 1 = yes	Record age; prompt for approximate age if Resp does not know; 99 = can't remember **[NAME ON THE CURRENT LINE] to [NAME ON THE NEXT LINE**	(do not read list – circle all responses given by respondent; more than one answer possible) probe for any other reason **[NAME ON THE CURRENT LINE] to [NAME ON THE NEXT LINE]?**
2					A B C D E F G H I J K L M N 0 P
3					A B C D E F G H I J K L M N 0 P
4					A B C D E F G H I J K L M N 0 P
5					A B C D E F G H I J K L M N 0 P

Code for R10:

A = (you or church) moved too far away
B = was convinced by family to change
C = marriage
D = was convinced by friends to change
E = people received miracles at new church
F = prefer the lessons at new church
G = (if Christian) wanted a spirit-filled church
H = too much conflict in previous church
I = old church too strict or conservative
J = old church too lenient or liberal
K = wanted to be healed
L = offering too high at old church
M = new church allows polygamy
N = new church does not allow polygamy
O = other (specify in margins)
P = don't know

R11 *When was the last time you went to a church/mosque?* **If a Christian and R11= code 4 or 5 skip to R15**	In the last week .....1 In the last month.....2 Last 2 – 6 months.....3 More than 6 months ago .....4 **→R15** Never .....5 **→R15** Don't know 99
R12 IF NON-MUSLIM IN R4: *In the past 3 months, how regularly did you attend religious services?*	More than once a week.....1 Once a week .....2 2-3 times per month .....3 Once a month.....4 Less than once a moth.....5 Never .....6 Don't know 7
R13 IF MUSLIM IN R4: *What did you do to observe the month of Ramadan this past year?*	Did not change behavior AT ALL .....1 Only ate and drank in private during daylight .....2 Did not eat or drink at all during daylight .....3 Other .....4 specify: .....[_____] Don't know 99

R14	**IF MUSLIM IN R4:** *How often did you do daily prayers during the past week?*	5 times per day, everyday .....1 A few times a day.....2 About once a day .....3 A few times during the week .....4 Once .....5 Not at all.....6 Don't know 99
R15	*What other religious activities have you done in the last month?* **(READ LIST – CIRCLE ALL THAT APPLY)**	a) No other activities .....1 b) Choir .....1 c) Elder's meeting .....1 d) Bible/Koran study.....1 e) Prayer meeting.....1 f) Visiting the sick .....1 g) Revival meetings.....1 h) Evangelical work .....1 i) Islamic School/Madrasa .....1 j) Other .....1 Specify: .....[_____]
R16	**IF MUSLIM IN R4, ASK:** *Have you made Tauba?* **IF CHRISTIAN IN R4, ASK:** *Are you a born again**?***	Yes.....1 No .....0 **→R18** Don't know 99
R17	*Did this happen since we last interviewed you in 2004?*	Yes.....1 No .....0 Not interviewed in 2004……8888 Don't know 99
R18	*How much do you think tensions between Christians and Muslims in your area has increased or decreased in the past few years?*	Increased a lot.....1 Increased a little .....2 Not changed.....3 Decreased a little .....4 Decreased a lot.....5 Never was tension.....6 Not applicable / Only Christians or Muslims in area.....7 Don't know 99

Next, I would like to ask you a few questions about your primary religious leader or leaders

R19	*How often do your religious leaders talk about the following issues in religious services (or sermons)?* **INTERVIEWER:** fill in appropriate codes in columns moving across the table		**Code:** 1 = Every week 2 = Almost every week 3 = About monthly 4 = Seldom 5 = Never 99 = Don't know	If **R19** = 5, go to next line	**R20** Was this talked about last time you attended? 1 = Yes 0 = No
		a) *Being born again/making Tauba*		If 5 ↓	
		b) *Giving to the church/mosque*		If 5 ↓	
		c) *Healing*		If 5 ↓	

	d) *Death or the afterlife*		If 5 ↓	
	e) *Illness in general*		If 5 ↓	
	f) *HIV/AIDS in particular*		If 5 ↓	
	g) *Morality in general*		If 5 ↓	
	h) *Sexual morality in particular*		If 5 ↓	
	i) *Political issues*		If 5 ↓	
	j) *Witchcraft*		If 5 ↓	
	k) *Satanism*		If 5 ↓	

Now, I have some final questions about your religious beliefs

R21	**IF CHRISTIAN, ASK:** *Which would you say better represents Christianity?* **A.** **"***Self-denial, and taking up your cross to follow Jesus***"** ***B.*** *"Jesus wants to bless us and give us prosperity and abundance"*	A: Self-denial ..... 1 B: Prosperity ..... 2 DON'T READ: Both equally representative ..... 3 Don't know 99
R22	*Do you believe the recent famine in Malawi was the result of God's judgment?*	Yes ..... 1 No ..... 0 Don't know 99
R23	*Do you believe that prayer can protect one from getting HIV?*	Yes ..... 1 No ..... 0 Don't know 99
R24	*Do you think a person's overall success in life depends primarily on fate, efforts or luck?*	Fate ..... 1 Effort ..... 2 Luck 3

Section 9: Knowledge and Attitudes Questions

"Finally, I would like to ask your opinion on certain topics related to marriage and other issues."

K1	***Do you think it is proper for a wife to leave her husband if:***	**Yes**	**No**	**Don't Know**
a)	*He does not support her and the children financially?*	1	0	99
b)	*He beats her frequently?*	1	0	99
c)	*He is sexually unfaithful?*	1	0	99
d)	*She thinks he might be infected with HIV?*	1	0	99
e)	*He does not allow her to use family planning?*	1	0	99

f) *He cannot provide her with children?*	1	0	99
g) *He doesn't sexually satisfy her?*	1	0	99
K2 ***Is it acceptable for you to go to*:**	**Yes**	**No**	**Don't Know**
a) *The local market without informing your husband?*	1	0	99
b) *The local health center without informing your husband**?***	1	0	99
K3a ***A woman has the right to refuse sex with her husband when she:***	**Yes**	**No**	**Don't Know**
a) *Is tired from hard working*	1	0	99
b) *Doesn't feel like it or is not in the mood*	1	0	99
c) *During the abstinence period after childbirth*	1	0	99
d) *Is no longer attracted to her husband*	1	0	99
K3b ***A woman has the right to refuse <u>unprotected</u> sex with her husband when she:***	**Yes**	**No**	**Don't Know**
a) *Thinks her husband may have HIV/AIDS*	1	0	99
b) *Thinks she may have HIV/AIDS*	1	0	99
c) *Doesn't want to risk getting pregnant*	1	0	99
K4 ***If a woman often refuses sex with her husband, is it acceptable for the husband to:*:**	**Yes**	**No**	**Don't Know**
a) *Refuse to eat her nsima*	1	0	99
b) *Sleep with another sexual partner*	1	0	99
c) *Sleep with her by force*	1	0	99
d) *Stop providing for her*	1	0	99
K5 ***Now I will read you a few statements about AIDS. Please tell me if you think that these statements are true, not true or if you don't know if they are true or not.***	**True**	**Not True**	**Don't Know**
a) *A pregnant woman can transmit the AIDS virus to her unborn child*	1	0	99
b) *A woman can transmit the AIDS virus to her child through her breast milk.*	1	0	99
c) *You can get AIDS if you have sex with someone who looks perfectly healthy*	1	0	99
d) *AIDS has a cure.*	1	0	99

"Now I want to ask you just a few questions about the social aspects of AIDS in your village, about how people in your village feel towards those with AIDS and how people with AIDS might feel living in your village. There are no right or wrong answers to the questions."

K6	*Most people in your village are comfortable around someone with AIDS.*	Strongly disagree .....1 Disagree .....2 Agree .....3 Strongly agree .....4 Don't know…….99
K7	*People in your village feel that those who are movious and got AIDS through sex have gotten what they deserve.*	Strongly disagree .....1 Disagree .....2 Agree .....3 Strongly agree .....4 Don't know…….99

K8	R*eligious leaders in your community feel that those who are movious and got AIDS through sex have gotten what they deserve.*	Strongly disagree .....1 Disagree .....2 Agree .....3 Strongly agree .....4 Don't know……99
K9	*People who are infected with AIDS are expelled from your church/mosque.*	Strongly disagree .....1 Disagree .....2 Agree .....3 Strongly agree .....4 Don't know……99
K10	*Would you buy fresh vegetables from a vendor if you know he/she had the AIDS virus?*	Yes .....1 No……0
K11	*If a female teacher has the AIDS virus, should she be allowed to continue teaching in the school?*	Can continue .....1 Unsure, depends on the specific case .....2 Should not continue.....3 Do not know ……99
K12	*If someone in your village – just a normal person who you found working in the fields or in their home – contracted HIV, how long do you think this person would continue to live?*	Less than 6 months .....1 Between 6 months and 2 years.....2 Between 2 and 5 years.....3 More than 5 years .....4 Don't Know……99

Section 10: Group Membership and Social Participation Questions

"Now I am going to ask you about your recent social activities"

G1	*How many times in last month have you been to:* **(READ RESPONSES)**	a) A *funeral?* ..... # of times [___] b) *A drama performance?*..... # of times [___] c) *A beer place*? ..... # of times [___] d) *A place where people dance?*# of times [___] e) *A market?* ..... # of times [___]
G2	*How many times in last year have you been to:* **(READ RESPONSES)**	a) *A wedding?*..... # of times [___] b) *drama about family planning?*# of times [___] c) *A political meeting?* ..... # of times [___]
G3a	*Is there an AIDS Youth Group at any school in your village or nearby?* **(READ RESPONSES)**	Yes .....1 No.....0 → **G4** Don't Know .....99→ **G4**
G3b	*When is the last time you attended any of their events?* (**READ RESPONSES)**	In the last week .....1 In the last month.....2 Last 2-6 months.....3 6 months or more .....4 Never.....5 Don't Know 99
G4	*Are you a member of any:* **(READ RESPONSES)**	Yes No a) Farmer's *group* .....1 0 b) Health *group* .....1 0 c) AIDS group .....1 0 d) *Finance/loan group*.....1 0
G5	**I***s there any group in your village that is:* **(READ RESPONSES)**	Yes No a) Assisting *orphans* 1 0 b) Assisting people *who are sick at home* 1 0 c) *Assisting with economic development* 1 0

Section 11: Work and Time Use

"Now I am going to ask you a few questions about how people help each other and how they spend their time."

T1	*During the past 12 months, what kind of work did you spend most of your time on?*	Agriculture.....1 Non-agricultural economic activities.....2 Domestic activities .....3 Other activities .....4 Specify: [_____]
T2	*With which specific activity did you spend most of your time in the past 12 months?*	Activity Code from CODE List .....[___|___]
T3	*Tell me up to 3 other work activities on which you spent a lot of your time in the past 12 months?*	Activity Code from CODE List .....[___|___] Activity Code from CODE List .....[___|___] Activity Code from CODE List .....[___|___]

T4. "Now I'd like to ask you about your daily activities."

INTERVIEWER: First, check if yesterday was a normal workday. If not, let the respondent talk about the last normal workday and skip holidays and holy days (Sundays for most Christians, Saturday for seventh day Adventists, and Fridays for Muslims). For instance, if you are talking to a Christian on a Monday, ask about Saturday. If answers do not refer to the day preceding the interview, write down date: **D_____/M_____/2006**

ACTIVITY CODE LIST

A. AGRICULTURE

Own Field/Agricultural Operations

10 Field preparation
11 Ridging
12 Planting
13 Transplanting/Supply (Kuwokela/kupakiza)
14 Fertilizing/Manuring
15 Weeding
16 Harvest
17 Animal Care
18 Gathering vegetables
19 Other operations

Agricultural (off-farm) labor

20 Agricultural wage-labor (for cash)
21 Agricultural wage-labor (in-kind labor)
22 Group field labor
30 Salaried employment

B. NON-AGRICULTURAL ECONOMIC ACTIVITIES

40 Marketing work/Sales
41 Handicraft production (zaluso)
42 Alcohol production
43 Transporting goods
44 Metal work
45 Basket/mat weaving
46 Carpentry
47 Charcoal/firewood preparation
48 Water collection for sale
49 Other cash activity

C. DOMESTIC ACTIVITIES

50 Making food/Cooking
51 Fetching water
52 Fetching/splitting firewood
53 Child care
54 Washing clothes
55 Repairing/building house/farm
56 Cleaning inside/outside house
57 Caring for an ill HH/family member

D. OTHER ACTIVITIES

90 Religious activities
91 Attending a funeral
92 Village help/community work
93 Attending school, studying/ school related work
94 Political meeting
95 Visiting with friends
96 Resting/sleeping
97 Eating
98 Sex

T5. *Would you tell me in detail what you did yesterday, starting when you got up?*

	Activity		Activity
01:00	[__|__]	01:30	[__|__]
02:00	[__|__]	02:30	[__|__]
03:00	[__|__]	03:30	[__|__]
04:00	[__|__]	04:30	[__|__]
05:00	[__|__]	05:30	[__|__]
06:00	[__|__]	06:30	[__|__]
07:00	[__|__]	07:30	[__|__]
08:00	[__|__]	08:30	[__|__]
09:00	[__|__]	09:30	[__|__]
10:00	[__|__]	10:30	[__|__]
11:00	[__|__]	11:30	[__|__]
12:00	[__|__]	12:30	[__|__]
13:00	[__|__]	13:30	[__|__]
14:00	[__|__]	14:30	[__|__]
15:00	[__|__]	15:30	[__|__]
16:00	[__|__]	16:30	[__|__]
17:00	[__|__]	17:30	[__|__]
18:00	[__|__]	18:30	[__|__]
19:00	[__|__]	19:30	[__|__]
20:00	[__|__]	20:30	[__|__]
21:00	[__|__]	21:30	[__|__]
22:00	[__|__]	22:30	[__|__]
23:00	[__|__]	23:30	[__|__]
00:00	[__|__]	00:30	[__|__]

99 Other leisure activities	

Section 12: Social trust

Many organizations have been spreading information about HIV and how people can prevent themselves from getting infected. Some people trust these organizations to provide accurate information, and some people don't. I'd like to hear your opinion. I'm going to read you a list of organizations and people.

I'd like to hear how much you trust them to provide accurate information about HIV.

U1	List of organizations / people:	A great deal	A good amount	Very little	None	Don't know
	a) *Your best friend*	3	2	1	0	99
	b) *Medical staff at the **government** clinics and hospitals*	3	2	1	0	99
	c) *Traditional Healers*	3	2	1	0	99
	d) *Medical staff at **private** clinics and hospitals*	3	2	1	0	99
	e) *Religious Leaders*	3	2	1	0	99
	f) *VCT (HIV testing) Counselors*	3	2	1	0	99
	g) *The Media [newspapers/radio])*	3	2	1	0	99
	h) *Your local Community Based Organizations (CBOs)*	3	2	1	0	99
	i) *Teachers*	3	2	1	0	99
U2	*Now that you have thought about each one, I'd like to ask you, which is the one that you trust MOST to provide accurate information about HIV? I'll read the list again.* *INTERVIEWER: Read list from U1, and write letters.*	1. [_____] [Write letters]				
U3	*On the other side, which is the one that you trust LEAST to provide accurate information about HIV? I'll read the list again.* *INTERVIEWER: Read list from U1, and write letters.*	1. [_____] [Write letters]				

Section 13: Discussions about MDICP

Finally, I would like to ask you some questions about the persons with whom you have talked about this survey.

G6	*Have you discussed the 2006 "Let's Chat" survey with anyone, (apart from an MDICP interviewer)? If so, with whom did you discuss?* **(MORE THAN ONE ANSWER IS POSSIBLE)**	Spouse or regular partner ..... 1 Child/Children ..... 2 Other family member ..... 3 Friend ..... 4 Acquaintance ..... 5 Other ..... 6 Specify: [_____] Did not discuss with anyone 7

G7	*Do you know whether any of these persons have already been interviewed by "Let's Chat" this year?*		**Yes**	**No**
		a) Spouse or regular partner	1	0
		b) Child/Children	1	0
		c) Other family member	1	0
	(MORE THAN ONE ANSWER IS POSSIBLE)	d) Friend	1	0
		e) Acquaintance	1	0
		Other	1	0
		Specify: [_____]		

These are the questions that I wanted to ask you. Thank you very much for talking with me today. We very much appreciate your help in this research project.

Section 14: Interviewer's Questionnaire

SOON AFTER THE INTERVIEW, PLEASE ANSWER THE FOLLOWING QUESTIONS

I1	**Personally, how would you rank the respondent's physical attractiveness relative to other persons of about the same age and sex?**	Much more attractive than average ..... 1 More attractive ..... 2 Average ..... 3 Below average ..... 4 Much less attractive than average 5
I2	**How well do you know the respondent's family?**	Not at all ..... 1 By name only ..... 2 Quite well ..... 3 Very well 4
I3	**Are you related to the respondent (through blood or marriage)?**	Yes ..... 1 No ..... 0 Don't Know 99
I4	**How wealthy do you think the respondent's household is in comparison with other households in the village?**	One of the poorest ..... 1 Quite poor ..... 2 Average ..... 3 Quite wealthy ..... 4 One of the wealthiest ..... 5 Cannot tell 6
I5	**Degree of cooperation**	Bad ..... 1 Average ..... 2 Good ..... 3 Very good 4
I5a	**How comfortable was the respondent when you were asking about sexual partners?**	Completely comfortable ..... 1 Mostly comfortable ..... 2 Slightly uncomfortable ..... 3 Mostly uncomfortable ..... 4 Completely uncomfortable 5

I5b	**Did the respondent understand the concept of likelihood or chance in the questions on expectations (X1 to X5)?**	Fully understood ..... 1 Mostly understood ..... 2 Understood after a while ..... 3 Remained unclear until the end ..... 4 Did not understand at all 5
I6	**Does the respondent's house have a pit latrine?** **NOTE TO INTERVIEWER- YOU MUST CHECK THIS PERSONALLY, DO NOT ASK RESPONDENT**	Yes ..... 1 No 0
I7	**Describe the most uncomfortable moment of the interview (i.e. question numbers, how discomfort communicated):** _____ _____ _____	
I8	**Do you have any other comment about the interview?** _____ _____ _____	
I9	**Enter Interviewer ID:**	ID:..... [___|___]

End of Survey

TIME FINISHED [__|__][__|__] (24 HOUR TIME)

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