

# Field Notes

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## Maasai Culture and its Effect on Sexual Health: A Field Study on the Disparities of Knowledge within the Community

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Kenya has been greatly impacted by sexually transmitted infections, particularly HIV/AIDS. Although numerous HIV/AIDS prevention programs exist in Kenya, the prevalence of the disease remains fairly high at a rate of 6.2%. Narok County is a region in southern Kenya in which 99% of the population is Maasai.<sup>1</sup> Although the Maasai make up such a large proportion of this region, very few studies on HIV/AIDS have been conducted on this specific population. As cultural sensitivity is crucial in implementing preventative measures, the purpose of this field study was to assess the societal norms and behaviors that contribute to the high transmission rates within the Maasai community of the South Narok district and to gather information on gender- and age-related attitudes regarding the topic. We believe that investigation into cultural barriers and current attitudes and opinions of different age groups and professionals will contribute to the implementation of a sexual health education program that effectively reduces the prevalence of sexually transmitted infections within this community based on its specific needs. To this end, we investigated several cultural, socioeconomic and logistical factors that influence sexual health decisions amongst the Maasai.

### GOALS OF OUR RESEARCH

HIV is a virus that destroys its hosts' immune systems and significantly reduces quality of life, making AIDS—the resultant condition—responsible for 58.8 million disability-adjusted life years (DALYs) worldwide.<sup>2</sup> In Sub-Saharan Africa, an estimated 22.1 million people currently live with HIV/AIDS, a number that is nearly 150% higher than that of any other region worldwide. Specifically in Kenya, 1.5 million people are infected with HIV/AIDS.<sup>3</sup> Women of 20–25 years of age comprise the demographic group with the highest rates of HIV infection (13%), while the highest rates for men are in the group aged 40 or older (13%).<sup>4</sup> As this part of the world has the greatest number of people living with HIV/AIDS, action in this region must be prioritized in order to understand the cause of the problem and find solutions.

The most prominent indigenous tribe of southern Kenya is the Maasai, a pastoral tribe that resides in the most rural region of the country. This Christian tribe, whose primary language is Maa, comprises 99% of Narok County, a district located near the Tanzanian border of Kenya. The goal of this field study was to assess the cultural needs, sexual health and education of the Maasai population of the Loita Hills (a province of Narok County) to be able to address the issue of HIV/AIDS in a culturally-sensitive manner.

By conducting interviews with local students, tribal leaders, health professionals and school employees, we hoped to evaluate the efficiency of the current healthcare infrastructure of this area. Although knowledge of the existence of HIV and other sexually transmitted infections (STIs) exists within the Maasai community, the usage of condoms is reported at a meager rate of 15%.<sup>5</sup> In the Maasai culture, semen has traditionally been viewed as beneficial to female health, though this view is gradually disappearing.<sup>5</sup> In regards to pregnancy, a family is viewed to be more financially and socially well-off with a greater number of children.<sup>5</sup> Since the us-

age of contraception lowers the chances of pregnancy, condom use is subsequently reduced. The benefits of condom usage are also not widely recognized because knowledge of STIs is minimal within this community and sex education is not openly provided for younger children. Thus, well-implemented sex education programs could play a significant role in reducing STI transmission rates among the Maasai by increasing condom use and encouraging other preventative measures.

There are several HIV/AIDS prevention programs currently active in Kenya, ranging from those of non-governmental organizations (NGOs) to government efforts, and including the USAIDs, International Medical Corps and Avert Kenya. But even though such programs exist, rural villages do not benefit from them as much as major cities due to unequal funding, lack of resources and underdeveloped infrastructure.<sup>3,6,7</sup> By acquiring a deeper understanding of the underlying causes of sexually transmitted infections within this population, it may be possible to formulate and implement a culturally sensitive means of reducing STI prevalence.

### METHODS

This interview-based study was conducted in the South Narok District of Kenya where large populations of Maasai reside. Locations that were assessed include the villages of Ilkerin and Entesekera as well as the city of Narok, as they are the most populous areas of the district. To evaluate the relationship dynamics and sexual practices of the Maasai youth, 80 primary school students at Ilkerin-Loita Boarding Primary School and 80 secondary school students from Loita High School were interviewed. This participant demographic was specifically selected because school-aged non-students were not available to participate due to familial obligations. In an attempt to reduce bias, an even number of males and females were selected as well as an equal number of students from each age group.

160 students (80 male and 80 female) were selected at random based on their ages, and each was asked about his or her class level, the age at which he or she became sexually active and his or her number of previous sexual partners. Additionally, the students were asked about their knowledge of sexually transmitted infections, including specific STIs such as HIV/AIDS, gonorrhea, chlamydia, syphilis and herpes simplex virus as well as the modes of transmission, symptoms of and protective measures that can be taken against each of these diseases. They were also asked to provide examples of the information they had received regarding sexual health from their schools' science courses and health clubs (Table 1). This was done to assess the efficacy of the current sexual health courses that are available to the students. The questionnaire administered to the students is shown in Table 1.

Science teachers of Ilkerin-Loita Boarding Primary School and Loita School District board officials were also interviewed to determine what measures are taken in the classroom to ensure the sexual safety of primary and secondary school students. They were asked about the school's health curriculum as well as their opinions on the root of the STI problem and the roles they play when they are suspicious of a student's STI status. The pastor of Ilkerin-Loita Boarding Primary School, who also functions as the students' counselor, was interviewed to assess his relationship with the students and their level of comfort in discussing personal topics with him, including relationships and sexuality. He was also asked to explain what measures he takes when students seek advice from him on such matters (Table 2).

As the Ilkerin Loita Community Dispensary is the only dispensary—public clinic—within the Loita Hills region, the clinician and community healthcare worker of the clinic were interviewed to determine the number of STI cases they encounter annually, the most common STIs they face and the demographics of those who are diagnosed with these diseases. Moreover, they were asked about their level of medical training and the clinical resources at their disposal (Table 3).

Nurses at the Entesekera Health Center were interviewed to evaluate their level of training, the prevalence of sexually transmitted infections in the area and the measures taken by the hospital to lower the rates of STI transmission (Table 3). These questions were asked to determine the skill level of the community healthcare workers and nurses as well as the resources that are available to visiting patients.

Within the Loita Hills region is a non-profit organization called Enteshota Loita Community Based Organization (ELCBO) that is dedicated to educating local citizens about STIs and protective measures. Individuals who work for this organization were also interviewed to examine their efforts in educating and empowering citizens—women and youths in particular—with regards to sexual health. They were asked about the steps they take to ensure that they reach a significant proportion of the population as well as what resources they provide to those in need of sexual health advice. They also provided information on the demographics of those who take the initiative to approach them and the primary reasons why individuals seek help from ELCBO (Table 4).

Moreover, a convenience sample of 100 locals was selected while conducting field research. Individuals were asked about their personal and home lives, marriage and children as well as certain cultural practices that they personally engage in (Table 5). This was done to gain a better understanding of the current cultural practices of the Maasai in order to formulate culturally-sensitive

measures that can be implemented in the future.

Finally, in addition to locals, Maasai community leaders were questioned to assess how Maasai cultural practices potentially influence the spread of sexually transmitted infections among the people. Furthermore, they were asked about their knowledge of STIs, the history of the problem in the community and what role they have specifically played in lowering transmission rates (Table 6).

## RESULTS

In the Maasai community, the average age at which children begin engaging in sexual activity is ten. At the primary school, with class levels from 1-8, there were a total of 810 students (502 males and 308 females). At the secondary school, with class levels 9-12, there were a total of 407 students (250 males and 157 females). Of the students surveyed from both schools ( $n=160$ ), 78% stated that 4-10 female students in the upper grades (classes 6-12) drop out per academic year due to pregnancy, while the remaining 22% believed this number to be much higher, at an estimated 4-10 pregnancies per academic term (three months). Although these statistics apply to the 260 females in the upper class levels, various students stated that occasionally, their lower-class level peers become pregnant as well. There was a consensus in the idea that pregnancy rates are higher in female students who do not live on-campus, as

it is uncommon for sexual activity to take place on school grounds. However, pregnancies do occur when students return home for the holidays after each term. Many women do not have permanent partners and are exposed to multiple partners throughout their youth. Furthermore, as polygamy is a Maasai cultural normality, it is difficult to openly discourage. However, with education, it is possible to adopt safer sexual practices within these relationships among future generations.

Individuals are often reluctant to seek help regarding

their sexual health because of the stigma associated with sexuality. To their benefit, the younger Maasai generation is receiving more exposure to such topics through the Internet and social networking. However, there is still a large majority unaware of sexual education resources. We recommend that in order to better educate the locals, community NGOs and healthcare clinics should place informational posters and pamphlets in their facilities that are easily accessible to the community. These sources could provide information on the importance of condom use and testing as well as images of the clinical manifestations of various STIs. By better recognizing the symptoms of various STIs and being aware of prevention methods, disease rates can be significantly reduced within the community.

## Cultural Barriers

The homes of the Maasai are circular structures called "manyattas," which are anywhere from six feet to ten feet in diameter and consist of two beds: one for the parents, and one for the children to share. As one of the science teachers at the primary school explained, "Children grow up witnessing their parents engaging in sexual intercourse and learn the act from a young age. When the family has guests, the children are expected to stay at a neighboring manyatta to make room for the visitors. No separation exists between the female and male children there, and this provides them with the opportunity to experiment sexually." Creating separate bedrooms or even separate manyattas for the children would greatly reduce their exposure to sexual activities and may delay their experimentation. In the possibility that providing the chil-

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dren with their own space may actually further encourage them to experiment, we hope that by educating the community, parental involvement can help promote safe behaviors.

The Maasai's pastoral lifestyle also contributes to their polygamous behavior. As the Maasai men must travel long distances to graze their cattle, they frequently seek sexual satisfaction from females along the way, contributing to the high rates of extramarital affairs. In the Maasai culture, men in the same age group are initiated as warriors, or "morans," together. Those who become morans discontinue their education to take on their new role within the community. Traditionally, wife sharing was admissible for morans in the same age group. Though this is becoming less acceptable now, it is still practiced in secret.

Of the 100 locals who were interviewed, 64 were female and 36 were male. Of the females, 11 were aged ten and under, 15 were between ages 11 and 25, 30 were between ages 26 and 45 and the remaining eight were aged 46 or above. 50 of these 64 females were married, and 92% of these marriages had been arranged. In the Maasai community, parentally arranged marriages are common practice because the dowry offered by the groom's family in exchange for the bride contributes a substantial amount of property to the bride's family. Of the 50 married women, 31 were married to a man who had at least one other wife. These women described their relationship with the other wife (or wives) as amicable and found it beneficial to have additional help in the home. Of the 36 men who were interviewed, 28 were above age ten, and 20 of these were married. Of the 70 total individuals who were married, 71% believed that extramarital affairs are still occurring within their community, but only 12 people attributed this to the fact that marriages are arranged. It should be noted however that according to many women, an increasing number of women are now refusing to marry the man chosen by their parents thanks to the female-empowerment movement that is taking place throughout the region. Women are beginning to realize that they have a choice in such matters and are taking a more proactive approach in their relationships.

The Maasai often have many children to help care for the family animals. Because public schools are scarce and funding a child's private education is expensive, families can only afford to send a small number of their children to school. Most frequently, the daughters are those who do not receive the opportunity to continue their education because they are married around age 12. Early marriages are incentivized by dowries, offerings of large numbers of cattle, goats and sheep to the bride's parents. According to one of the CBO workers, "Although mothers wish for their daughters to progress, it is often the father who discourages their education and promotes early marriage." Moreover, when an unmarried girl becomes pregnant, she is often forced to abandon her schooling and marry any man who accepts her and her unborn child.

There is still a significant social stigma associated with STIs within the community. For instance, when people within the community think they may have contracted a sexually transmitted infection—specifically HIV/AIDS as they perceive this to be the most detrimental—they secretly seek help from a healthcare professional and hide their diagnosis from the community to avoid public shaming. However, a large number of the Maasai villagers still use alternative- or self-medication. Although more individuals are seeking help from hospitals and local dispensaries, there are still some who believe that they can treat their HIV/AIDS by using herbal remedies at home. For bacterial infections such as gonorrhea and syphilis, homemade herbal remedies are more commonly used. Many of the locals who were interviewed stated that visiting an herbalist or 'witch doctor' is a better option than seeing

any other health professional, as the herbalists are readily available. Additionally, Kenyan law requires that professional health centers inform an individual's spouse of his or her STI status, further deterring individuals from seeking out professional help and contributing to the spread of disease.

### Logistical and Geographical Barriers

Though many of the schools in the Loita Hills area are boarding schools, dormitory fees are considered to be very expensive, costing families 4400KES (50.6USD). This forces a majority of students to commute from home for 640KES (7.28USD), which is much more affordable. As villages are dispersed throughout the region, students of all ages must walk an average of eight kilometers back and forth from school, which can make children walking home alone targets of crime, assault and rape. However, as it is culturally customary for women to be submissive, rapes are not viewed with the same level of seriousness as they are elsewhere and frequently go un-reported. The underreporting of rape may encourage the perpetuation of such incidences and thus further the spread of STIs, as proper protective measures are not taken during nonconsensual sexual activity.

### Efforts of the Community Based Organizations (CBO)

Enteshota Loita Community Based Organization (ELCBO) is an NGO that has three locations and four sub-locations within the Loita Hills region, funded by the National AIDS Control Council (NACC).<sup>7</sup> It educates locals on sexual health while also advocating against female genital mutilation, which is still practiced illegally among the Maasai. Each month, ELCBO hosts a three-day seminar at one of its locations to educate locals by showing videos, provide condoms from the Ministry of Health through the World Health Organization (WHO), test for STIs

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and provide counseling. Individuals are encouraged to interact and share their ideas regarding sexuality, after which they might feel more empowered to spread their new knowledge throughout their communities. Those who test positive for an STI are referred to the health center, where they can receive medication provided by the government. Although contraception is not commonly accepted in the Maasai culture, the community has reported an increase in condom use over the past five years, mainly due to the educational efforts of groups such as the ELCBO. Representatives of this organization also visit local schools twice a week to educate students on sexual health. Since most students do not receive any information on sexual health from their families, they rely on these organizations and school health classes to gain such knowledge.

Individuals who visit the ELCBO office are typically students ranging from the ages of 12-17, but even those as old as 40 years of age contact the organization for condoms. One of the community workers stated, "Young girls often seek help from the center when they are being forced into marriage by their parents against their will. In such cases, we visit the family along with an educated female as a role model, to advocate for them to continue attending school as opposed to getting married." More men visit than women because they are generally more open about their sexuality, especially to the male workers at the office. It is noted that the females who do visit, however, are not ashamed to talk to the male workers about their issues.

According to the community workers, birth control pills were introduced into the community five years ago and have helped to decrease the rates of teen pregnancy. However, girls aged 13 and older still do become pregnant quite frequently due to lack of knowledge, as it is uncommon for uneducated parents to discuss

sexuality with their children. Additionally, the fathers who typically attend these seminars are the ones who also send their daughters to school, indicating that there is a correlation between an appreciation for education and openness to understanding sexual health.

**School Environment**

In Loita, sexual health education is incorporated into health classes, science classes and social science classes. As reported by the science teachers, sexual health education is taught at the primary school level, beginning in class two (ages seven to eight) at a much more basic level than in the upper level classes. This is necessary as the younger students often engage in sexual activity without being aware of the consequences of their actions. Therefore, it is not uncommon for them to become pregnant without understanding the physiological rationale behind it. Science teachers are thus now advocating for a renewed curriculum that teaches younger students about their bodily functions and the changes that occur during puberty so that they can make appropriate decisions regarding such matters.

Primary school students in the upper classes as well as secondary students are taught the very basics about various sexually transmitted diseases such as HIV/AIDS, gonorrhea, chlamydia and syphilis in their science curricula. Although an attempt is made to educate the children about the signs and symptoms of these diseases as well as the protective measures one must take in order to avoid infection, the material that is used is often outdated, lacks visual aids and has unrelated statistics, leading to a very low impact rate. Furthermore, most of the STI prevention efforts were more religion-based, as opposed to providing students with the biological facts necessary for making logical, relevant decisions. For instance, the health books used by students had pictures of churches, schools and hospitals as opposed to anatomical photos or pictures of various STI symptoms and presentations. Age-appropriate visual aids, statistics and geography-specific tools should be utilized in order to ensure that sexual health courses are comprehensive and effective.

It would also be beneficial to provide students with information on local disease rates in addition to a list of local dispensaries and clinics that offer testing and treatment. Furthermore, it is important that students are tested on the material in an academic setting after initial exposure to ensure that they are actually retaining the information. As each age group beginning from primary, secondary and postsecondary schools has a different most common STI, it is important to approach these student groups accordingly. A systematic curriculum that includes visual aids and photographs of the common symptoms of STIs would teach students to be more aware of the signs of such diseases, should they be present on their own bodies. By being familiar the presentation of common STIs, students would potentially be able to diagnose their diseases earlier on and prevent them from spreading.

Despite their existing knowledge of STIs, the younger students do not take the initiative to be tested until teachers notice the signs and suspect that the children might be infected. The schools provide sexual health education, but do not encourage

condom distribution to students to discourage sexual activity. Most schools also promote abstinence due to religious affiliation. However, the science teachers often take it upon themselves to educate students on the proper use of contraceptives. Some even provide their students with condoms. Due to the shame and discomfort associated with seeking out help, students admit that they still fail to use protection despite knowing that they should. As the health clinics surrounding the school offer testing free of charge, it is the responsibility of the students to seek appropriate help, as their parents are often uneducated and cannot adequately advise the children. By revamping the sexual health curriculum to better emphasize the seriousness of STIs, children would possibly be more inclined to take protective measures.

At religious schools, the school pastor acts as a confidant

Table 1: Survey on students' knowledge of common STIs and STI resources

1. State your gender.
2. What class level are you in?
3. Are you sexually active? If so please state the age you became active.
4. How many sexual partners have you had? (NA if not sexually active)
5. Have you received exposure to sexual health courses over the course of your education?
6. Are there specific organizations/clubs on campus that give more information on safe sex practices?
7. Roughly how many of your classmates become pregnant each year? (as far as you know)
8. What are the top 3 STIs you believe you are most at risk for in your age group?
9. Please elaborate on your top 3 STI knowledge (i.e. prevention, protection, symptoms, treatment)
10. Are you aware of your community and school resources? If so what are they?
11. Do you believe that STI cases have gone down in your community based on personal discussion with your peers?
12. Do you believe students are likely to stay in monogamous relationships?
13. How far is your home from this school?
14. What form of transportation do you use to get to/from school? (Disregard if you board)
15. What do you think can be done to increase awareness and lower prevalence rates of STIs?

Table 2: Survey for the school faculty and pastor on STI curriculum/counseling

1. Do you teach the sexual health courses in your science classes?
2. What tools/materials are used?
3. Please share your current sexual health curriculum
4. What do you believe is placing students at risk for STIs?
5. How are students approached if suspected to have a STI?
6. Who do students confide in for sexual health questions and concerns?
7. Are there gender specific teachers made available for students?
8. Where do you believe sexual activity is taking place?
9. Do you believe students stay in monogamous relationships?

Table 3: Survey for the nurses and healthcare workers

1. What is your level of medical education and training?
2. How many STIs do you encounter yearly?
3. What are the most common STIs?
4. What age group is most prevalent for the top 3 STIs presented at the clinic/hospital?
5. How are STIs generally diagnosed?
6. How are STIs treated?
7. Who provides funding for medications?
8. How often are supplies replenished?
9. What current measures are in place to lower transmission rates?
10. Are patients more open with gender specific practitioners?
11. What medication is generally prescribed? How much does medication cost? Who provides the clinics with necessary medications?
12. Do patients always use the medications given to them? Are their alternative medicinal preferences?
13. How does the center contribute to lowering STI rates?

Table 4: Survey for the NGO community workers

1. How many people come to information sessions held by this NGO?
2. What efforts are in place to generate more interest in safe sexual health practices?
3. What is the average age of participants?
4. What are the primary reasons that individuals come into the centers?
5. What resources are provided on hand for individuals who come in seeking private counseling?
6. Are gender specific counselors available?
7. Please comment on what you believe is the modernization of your culture in regards to relationships and safe sexual practices.
8. How are community members who reside far from the center impacted?

Table 5: Interview questions answered by the sample of locals

1. Please state your gender and age.
2. Please describe your daily activities.
3. Would you consider your community to be pastoral?
4. Are you married? (If yes answer question #5)
5. Was your marriage arranged?
6. Does your culture permit polygamous marriages?
7. Is it the male or the female who has more than one spouse?
8. If your husband has more than one wife, do you establish a relationship with her? Males, if you have multiple wives, please describe the relationship they have with one another.
9. At what age were you married?
10. How many children do you have?
11. How many of your children go to school?
12. If you have children who do not go to school, what do they do?
13. Are all of your children from the same partner?
14. On average how many children do most families have?
15. Are you aware of STIs? Please explain.
16. What would you do if you contracted an STI?
17. Is infidelity an issue within your pastoral community? If so, is it socially acceptable?
18. Please describe what wife sharing means in your community.
19. Is wife sharing still a common practice?
20. Please describe your family's living situation.
21. Do you engage in sexual activity in the presence of your children? Children, have you witnessed your parents engaging in sexual activity?
22. Please describe the spatial dimensions of your manyatta (home).

Table 6: Survey for the Maasai community leaders

1. What cultural practices do you believe lead to increased transmission rates?
2. What community resources are being used to help lower transmission rates?
3. If so, do you believe STI rates have been lowered or increased?
4. What do you believe is the root of the transmission?
5. What role do you specifically have in helping your community become more aware of safe sexual practices?

Table 7: Average onset of sexual activity

Gender (n=160)	Average onset age of sexual activity
Male	10 years old
Female	10 years old

Table 8: Females in relationships in Secondary School

Number of relationships secondary school	n=40
Female in one relationship	28/40 70%
Female in more than one relationship	14/40 35%

Table 9: July 2009- Aug 2012 Medical Records

Sexually Transmitted Infections Reported	Percentage who acquired
Gonorrhoea	2.16%
Syphilis	.047%
Herpes Simplex Virus	.047%
Other STI's (not otherwise specified)	1.49%

and provides students with appropriate counseling after he is informed of their STI status, either by the students or by other school officials. According to the pastor, boarding students as well as commuters aged 14 and older feel comfortable enough to seek advice regarding their sexual health. However, the male students are more likely to do so than the female students. The pastors typically provide advice from a biblical point of view and preach abstinence, which may be impractical as children who wish to engage in sexual activities tend to do so regardless of religious teachings. The female students are placed at an additional disadvantage because of the lack of female advisors. Therefore, in the schools, hiring a female counselor or empowering female teachers would be beneficial to the female students who do not feel comfortable confiding in an older male teacher or headmaster about their sexuality. It would also be advantageous to transition from a system that preaches abstinence to one that advocates safe sex practices, although this would be a significant cultural leap. Furthermore, the implementation of a peer education program would be beneficial, as students are more inclined to learn from their age-mates when it comes to sexual health.

Throughout secondary school, a male student will have an average of five partners and typically get tested for STIs once

a year with the encouragement of the school health club, which meets once a week during the academic year. Students claimed that although they were aware of the prevalent STIs and recognize the signs of infection for diseases such as gonorrhoea, syphilis and herpes simplex virus, the cultural stigma associated with STIs makes it difficult for them to seek aid and information from various sources. Furthermore, 136 of the 180 students that were interviewed felt they would be ashamed to be caught inquiring about STI testing and contraceptives at the local clinic and would rather ignore any signs and symptoms, should they occur.

At the secondary school level, 28 of 40 female students stated that they had been in a romantic relationship before, and of those 28, 14 had been in more than one (Table 8). Teen pregnancy becomes more common at the secondary level, as approximately two girls become pregnant during each term at Loita High School. Though most girls who become pregnant are forced to drop out of school to care for their child, there are some who have the support of their families to continue their education while the family assists in taking care of the child. However, these girls are often shamed by their classmates, forcing them to switch schools. Although the faculty does its best to foster a respectful environment within the school, that task becomes challenging due to the extremely unbalanced student-to-teacher ratio.

### Healthcare Professionals/Clinics/Hospitals

In Loita Hills, locals can receive medical help at two medical centers. The Ilkerin Loita Community Dispensary is the local health clinic located near the primary school and operated by a clinician and a community health care worker. Kenyan clinicians receive three years of medical education (whereas doctors must complete five years as well as an internship), and the health care workers complete only their education through secondary school followed by a 6-week certification program. The Ministry of Health as well as USAID provides medication, condoms and Rapid HIV Test kits to the dispensary on a quarterly basis.<sup>7</sup> However, if they run out of supplies, they must wait until these organizations return to assess their needs at a later time. Though the dispensary provides condoms, the healthcare workers noted that a large majority of individuals who would actually go to retrieve them were younger generation males. However, since patients are usually uncomfortable directly asking healthcare workers for condoms, workers place them outside the clinic for patients to take.

At the Ilkerin Loita Dispensary, medical records were available beginning in 2009, and according to these records, the STI rates from July 2009 to August 2012 were as follows: 2.16% gonorrhoea, .047% syphilis, .047% herpes simplex virus and 1.49% "other STIs" (Table 9).

However, it should be noted that the diagnoses may not be entirely accurate, as most diagnoses were made merely based on visual symptoms by a young healthcare worker with very minimal training in medicine. Patients who seek treatment for sexually transmitted infection at the dispensary are typically between 15 and 45 years old. A visit to the dispensary costs 50KES (.60USD), a fee that is frequently waived when patients are incapable of paying. In addition to treating patients for the symptoms they present with, the dispensary attempts to take preventative measures by displaying visual aids on the life cycle of Malaria, Typhus and HIV/AIDS. However, none were displayed for other STIs such as gonorrhoea, syphilis and herpes simplex virus.

For more severe health issues, individuals are referred to the Entesekera Health Center, the main hospital of Loita Hills, lo-

cated 27 kilometers away from the primary school. Patients are often sent here from the dispensary if more resources are needed for treatment, but the distance remains a huge barrier as walking is the only means of transportation for most locals. The health center is equipped with an ambulance for distant patients at their expense and the Ministry of Health also provides them with medication and test kits. The health center also purchases its own supplies if needed. An outpatient visit to the Health Center costs 300KES (3.80USD), with an additional 250KES (2.99USD) for testing.

The Entesekera Health Center also has an education center that holds monthly seminars in order to educate locals on modes of transmission, means of protection and signs and symptoms of various sexually transmitted infections, although no measures have been taken to assess the effectiveness of these programs. Nurses also meet with tribal chiefs and prominent figures to discuss the prevalence of HIV in hopes of gaining their support in reducing transmission. It was noted that no pamphlets or other educational tools were made available to inform patients about STIs other than HIV/AIDS.

On the other hand, the major district hospitals have a much more advanced record keeping system. Although they have recently adopted an online record-keeping database for patients that are categorized by reason for visit, the actual prevalence of specific cases cannot be calculated due to the lack of an accurate population count per specific region. Ultimately, it is imperative that the rural village clinics adopt an organized and thorough record-keeping system. Further, by providing the current healthcare workers with more intensive training by educated professionals in more urban hospitals the rates of misdiagnosis of STIs could be substantially reduced. As correct diagnoses are made, the data that is provided to the government will subsequently become more accurate and up-to-date. In Kenya, if an individual tests positive for any sexually transmitted infection at a health center, the center is required by law to inform the individual's spouse so that he or she may receive appropriate testing and treatment as well. This deters individuals from seeking help at such clinics and encourages them to treat themselves, contributing to the high rates of STIs.

## CONCLUSION

In the past ten years since HIV/AIDS information was first disseminated to the South Narok District of Loita Hills, the number of STI cases has decreased significantly. However, the STI rates are still high relative to those of other developing countries. The primary reason for the high prevalence of sexually transmitted infections within the Maasai community is lack of awareness, primarily due to gender inequity and educational disparities. Though the government, local health clinics and

NGOs provide resources such as condoms and STI testing, the reception of such programs is tepid. The lack of motivation within the Maasai community may stem from the upbringing and cultural practices that children are taught from a young age. As the Maasai community relies heavily on cattle herding for financial income, a majority of families do not prioritize traditional education and instead wish for their children to learn proper agricultural techniques. This heavily influences the barrier to sexual health education among the Maasai youth.

Although sexual health education is provided to students in the school setting, funding a child's education is quite difficult for a majority of parents. Despite the fact that the Kenyan government passed the Basic Education Bill in 2012, requiring every child to receive an education, this law is not strictly enforced in remote villages.<sup>8</sup> Thus, basic schooling still remains a luxury that is available only to a small number of children. Additionally, after a thorough evaluation of the health curriculum of the Loita District, it is apparent that a large majority of schools preach abstinence and do not acknowledge the fact that the use of preventative measures such as condom use need to be taught to the student body.

At the Ilkerin Loita Community Dispensary, proper record keeping was not enforced. The visits of numerous patients often go unrecorded, and as under-qualified healthcare workers are continuously assigned to new locations, handwritten notes by each individual become easily misinterpreted over time. Thus, it may be possible that a number of STI cases have gone unreported or have been misdiagnosed. Also, as many STIs have similar clinical presentations or periods of latency, it is difficult to accurately diagnose a patient without proper medical training and the availability of adequate laboratory equipment, a difficulty that would also contribute to misleading data. Even if patients are accurately diagnosed, they may not always be compliant with treatment measures and would prefer relying on herbal remedies from a local "witch doctor" instead.

Although the Ministry of Health periodically provides health clinics with supplies, additional medicine and testing kits can be supplied to high-volume clinics. Because supplies are provided based on need, it is crucial that village dispensaries keep accurate records in order to replenish these materials as necessary. Furthermore, the sex of the healthcare worker affects whether or not patients seek assistance in regard to their sexuality. As young adult males are more likely to obtain condoms from health clinics, they shy away when the healthcare worker is female. In such cases, it would be beneficial for clinics to make condoms available outside, giving individuals the chance to obtain protection without having to feel ashamed in the presence of another person. Moreover, it is necessary for more information to be presented to

individuals seeking contraception on the implications of STIs as well as the biological specifics of certain diseases, as merely distributing condoms does not adequately teach individuals about their health.

We recognize that our student sample size was fairly small. However, as this study was conducted during the summer, a majority of the students had gone home for the holiday. Another weakness of our study lies in the fact that we utilized a convenience sample when interviewing the locals. This was due to the logistics, as collections of manyattas were located within a one-mile radius and researchers conducted the field study on foot.

Future studies can be conducted on a greater scale to incorporate the opinions of a larger population of Maasai. For instance, the North Narok District and other counties where Maasai reside can be included. Moreover, separate studies on the specific barriers to health promotion and disease prevention should be conducted. Evaluating school health curriculums, community efforts, NGOs and community health centers on an individual basis could provide more detailed information regarding the improvements that can be made in each of these areas. With collaborative efforts between these sectors, the Maasai community can be targeted from several angles and a significant change can be made in their overall sexual health. Ultimately, STI rates and sexual health practices in Sub-Saharan African tribes is an understudied field and as the tribes have such differing practices, it is difficult to generalize prevention programs and directly compare successes and failures. Thus, more data is necessary before parallels can be made between tribes.

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