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SAVE THE CHILDREN FEDERATION, INC. (USA)

**SUPPORT TO AIDS AND FAMILY HEALTH
(STAFH) PROJECT**

USAID GRANT NO. 690-0238-G-00-6040

FINAL REPORT

OCTOBER 1, 1995, TO SEPTEMBER 30, 1998

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
APPLE	AIDS Prevention Practices through Literacy and Empowerment
BLM	Banja La Mstogolo
CBD	Community-Based Distributor
CHAM	Christian Health Association of Malawi
COPE	Community-based Options for Protection and Empowerment
CPR	Contraceptive Prevalence Rate
DHMT	District Health Management Team
DHO	District Health Officer
DMPA	Depo-medroxyprogesterone Acetate
EOP	End of Project
EU	European Union
FP	Family Planning
FPP	Family Planning Promoter
GOM	Government of Malawi
GUD	Genital Ulcer Disease
HC	Health Center
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HSA	Health Surveillance Assistant
IEC	Information, Education, and Communication
IMR	Infant Mortality Rate
JSI	John Snow Inc
KAP	Knowledge, Attitudes, and Practices
MAM	Muslim Association of Malawi
MCH	Maternal and Child Health
MOE	Ministry of Education
MOHP	Ministry of Health and Population
MTE	Midterm Evaluation
NFPCM	National Family Planning Council of Malawi
OC	Oral Contraceptive
OR	Operations Research
PIS	Project Information System
SC/US	Save the Children Federation, Inc (USA)
STAFH	Support To AIDS and Family Health
STD	Sexually Transmitted Disease
TFR	Total Fertility Rate
UD	Urethral Discharge
USAID	United States Agency for International Development
WRA	Women of Reproductive Age

EXECUTIVE SUMMARY

1. Background

As part of the broader USAID-funded Support to AIDS and Family Health (STAFH) Project, which is aimed at reducing HIV transmission and slowing population growth in Malawi, Save the Children Federation, Inc (SC/US) received a 3-year grant to implement family planning and STD/AIDS activities in selected areas of Mangochi District. The main goal was to create demand for and improve the supply of family planning, HIV/AIDS prevention and STD diagnosis and treatment services in the project areas. The grant ran from 1st October 1995 to 30th September 1998.

Mangochi District has an estimated population of 700,000 people, of which about 80% are Muslim. In 1995, the estimated contraceptive prevalence rate (CPR) for the district was only 3.3%. HIV prevalence in the general population was unknown but considered very high based on rates among healthy blood donors (20%) and hospital patients (60-70%).

2 Major Methods and Activities

The goal of the SC/US STAFH Project was to increase the use of FP/STD/HIV services and behaviors that reduce risk of STD/HIV. The objectives were to enhance FP/STD/AIDS knowledge and to increase quality, availability, and accessibility to FP/STD services. SC/US STAFH staff directly implemented project activities, and also worked in partnership with Ministry of Health and Population (MOHP), Muslim Association of Malawi (MAM), Ministry of Education (MOE) and communities to achieve the project's goal and objectives. Activities to create demand for services and to change behavior included training of health center (HC) staff, health surveillance assistants (HSAs), community volunteers, primary and secondary school teachers, primary and secondary school students, out-of-school youth, religious leaders, and company employees on FP/STD/AIDS behavior change and communications messages. Simultaneously, the supply of FP/STD/AIDS services was enhanced through training of HC clinical personnel, HSAs, and community-based providers. In addition, HCs were provided with FP equipment and STD drugs. SC/US staff and relevant government or non-governmental partners jointly did supervision for all the activities. The project developed its own health information system (HIS) to monitor implementation of planned activities and progress in meeting the project goal and objectives.

The SC/US STAFH project also included an operations research component that assessed 1) the effectiveness of the project's intensive school-based AIDS education activities and 2) the effect of different approaches to delivery of family planning services (including community-based distribution) on contraceptive acceptance.

3 Accomplishments and Unmet Potential

Most of the planned project activities involved training and follow-on support and in most cases the targets were achieved or exceeded by the end of the project. Training accomplishments include

- 657 primary school teachers and headmasters and 75 secondary school teachers trained in AIDS prevention (and family planning at the secondary school level),
- 33 community-based groups and 39 school-based anti-AIDS clubs established and given training,
- 28 health center clinical staff trained in syndromic management of STIs,
- 8 health center clinical staff trained in provision of family planning services,
- 21 HSA hired and trained, with a specialization in family planning and AIDS prevention,
- 129 volunteer FPPs selected by their communities and trained to support the HSAs in community mobilization, and
- 29 volunteer community-based distributors (CBDs) trained to promote family planning and to deliver oral contraceptives (OCs) and condoms in their communities

CPR within the 7.5-km radius of target HCs has risen from the estimated baseline of 3.3% to between 9.7% and 17.7% (of all women of reproductive age) or between 12.9% and 23.6% (of married women of reproductive age) respectively

All 14 target HCs that provide STD services have 2 qualified providers in place who are able to conduct appropriate syndromic diagnosis and treatment of STDs when the necessary drugs are available. However, STD drug stock-outs are common at both MOHP and Christian Hospitals Association of Malawi (CHAM) facilities

Excellent working relationships were forged with SC/US's principal partners in the project: Ministry of Health and Population, Ministry of Education, and Muslim Association of Malawi

The SC/US STAFH project has been constructively and collaboratively phased out in the context of the district-wide CHAPS project. Phase-out meetings were held with HC in-charges, Primary Education Advisors (PEAs) and others. The CHAPS Project Management Unit (PMU) was utilized as an ongoing mechanism for planning the phase-out of STAFH and transition to CHAPS

4. Comments and Recommendations

The SC/US STAFH project successfully implemented most of its planned activities and thereby demonstrated the strong institutional capability of SC/US to develop, coordinate, and manage a complex and ambitious program of training and other interventions. The STAFH interventions have contributed to increased contraceptive prevalence and AIDS prevention in a large part of Malawi's Mangochi District. Moreover, it has helped to establish strong partnerships with government and community organizations (at all levels), upon which SC/US is now able to build and

expand its role in the District. The CHAPS project is designed to continue many of the STAFH service delivery activities on an expanded, district-wide basis, with much greater emphasis on strengthening local MOHP capacity and achieving sustainability of project activities. A new School Health and Nutrition project will also provide a mechanism for continued SC/US support in the area of school AIDS education in Mangochi District.

The following recommendations are offered in the context of continued work by SC/US in Mangochi district and elsewhere:

- Future projects of this type would benefit from inclusion of baseline and follow-up data collection to better assess progress towards achieving stated results. If possible, project monitoring should be based on routine data collection by the District rather than through the establishment of a parallel project HIS. If necessary, strengthening of the district systems should be part of the project purpose and design.
- Indicators are needed to measure all expected results.
- To maximize sustainability, projects of this type should be designed as joint efforts with host institutions rather than stand-alone projects. To the extent possible, SC/US should focus on strengthening capacity of local partners to deliver services on a sustained basis.
- In Mangochi District, SC/US should pursue opportunities for further collaboration with MAM, to build on the momentum and accomplishment of past cooperation.

5 Narrative Fiscal Report

Grant funds of \$737,162 were fully expensed. The final financial report will be prepared and submitted by the SC/US headquarters in the form of an SF269 that includes both the federal share and the match expenditures. Grant funds were expensed by cost element at approximately the following percentage rates of total

COST ELEMENT (USAID)	PERCENT OF TOTAL EXPENSES
Labor	26.3
Fringe Benefits	12.4
Supplies/Equipment	6.9
Travel/Per Diem	8.0
Other Direct Costs	25.0
Indirect Costs	21.4

BACKGROUND

Malawi has an estimated population of about 11 million people and an annual natural rate of increase of 3.2%. With an infant mortality rate (IMR) of 134/1000, a TOTAL FERTILITY RATE (TFR) of 6.7, a life expectancy at birth of only 54 years, a heavy burden of disease mainly from preventable causes, and a spiraling AIDS epidemic, Malawi has huge developmental challenges.

Approximately 700,000 people live in Mangochi District, the site of the SC/US STAFH project. Nearly 22% are women of reproductive age (WRA), and another 22% are teenagers. An estimated 80% of the district's population is Muslim. The District has one of the lowest literacy rates in the country, particularly for women. A very high level of knowledge of modern family planning exists, but a CPR of 3.3% (estimated rate for the district as a whole in 1995 at the beginning of the project) attests to serious disparities between knowledge and practice. Excluding private clinics, the District has 34 health facilities of which 23 currently offer FP services (Appendix # 1 Map Showing Distribution of Health Facilities in Mangochi District, and Appendix # 2 Mangochi District Health Facility Administrative Authority, STAFH Project Participation and FP Provision). Government and Anglican health facilities are the main source of contraceptives, and DMPA and OCs are the popular choices.

The AIDS epidemic is particularly serious in Mangochi District. Knowledge of valid ways to prevent AIDS is widespread but informed opinion is that adoption of risk reduction behavior is minimal as many people do not think that they, as individuals, are at risk of HIV infection (an infection which in Malawi is almost exclusively transmitted through unprotected heterosexual sex). The HIV positive prevalence rate is not known, but a prevalence of 20% among healthy blood donors and 60-70% among medical in-patients at the District Hospital indicates high levels in the general population. Many associated factors have been suggested for the high prevalence of HIV infection including multiple sex partners, a high prevalence of other STDs, and low condom use.

As part of the broader USAID-funded Support to AIDS and Family Health (STAFH) project, which is aimed at reducing HIV transmission and slowing population growth in Malawi, Save the Children Federation, Inc (SC/US) received a 3-year grant to implement FP and STD/AIDS activities in selected areas of Mangochi District. The main goal is to create demand for and improve the supply of family planning, HIV/AIDS prevention and STD diagnosis and treatment services in the project areas. The grant ran from 1st October 1995 through 30th September 1998.

MAJOR PROJECT ACTIVITIES AND METHODS USED

The goal of SC/US STAFH project was to increase the use of FP/STD/HIV services and behaviors that reduce risk of STD/HIV. The objectives were to enhance FP/STD/AIDS knowledge and increase quality, availability, and accessibility to FP/STD/AIDS services.

To achieve the project's goal and objectives, activities were carried out to create demand for FP/STDs/AIDS information, education and services in communities served by the ten (10) participating health centers (HCs) in Mangochi district SC/US STAFH staff directly implemented project activities and also worked in partnership with MOHP, MAM, MOE and communities Where possible FP/STD/AIDS education was integrated into existing health education curricula and structures Activities to create demand for services and to change behavior included training of HC staff, health surveillance assistants (HSAs), community volunteers, primary and secondary school teachers, primary and secondary school students, out-of-school youth, religious leaders, and private company employees The training content focused on FP/STD/AIDS behavior change and communications messages (Appendix #3 List of SC/US STAFH Training Courses)

Simultaneously, the supply of FP/STD/AIDS services was enhanced through training of HC clinical personnel, HSAs, and community-based providers In addition, HCs were provided with FP equipment and STD drugs During the first two years of the project, STD drugs procured by USAID were available (channeled through John Snow Inc [JSI] to SC/US) to help assure continuous availability of STD drugs at the participating HCs

Fourteen HCs formed the nucleus of the SC/US STAFH project, and 10 public sector HCs (6 MOHP and 4 Anglican) form the core of that nucleus

<u>MOHP</u>	<u>CHAM-Anglican</u>
Jalasi	Lulanga
Katuli	Mkope
Mankanjira	Mpondasi
Monkey Bay	St Martin's Hospital, Malindi
Namkumba	
Namwera	

The remaining 4 target HCs are workplace-based facilities, mainly serving employees (and their dependents) of

Army Naval Unit
 Maldeco Fisheries
 Sable Farming Company
 Malawi Lake Services

(Malawi Lake Services decided to participate only in the STD/AIDS component of the project This HC does not currently provide FP services The other 13 HCs listed above have received training and support in both FP and STD/AIDS)

The project intensively targeted approximately 157,000 people living in some 90 villages located within a 7.5-km radius of the 10 public sector HCs to increase demand and improve supply of FP and HIV/AIDS/STD services HC providers were trained in syndromic STD management and, where needed, provision of FP services The goal

was to have at least two qualified FP and STD providers at each HC HSAs were recruited, hired, trained (with a specialization in FP/AIDS/STDs), and supported to serve the 7.5 km catchment areas around the 10 HCs. These SC/US HSAs worked with the project and their local communities to select and train volunteer FPPs (or in 2 areas, CBDs). Residents of villages in the clinic catchment areas beyond the project's 7.5-km radius also benefit from the improved services. The total population served by the 10 HCs is approximately 350,000 (Appendix #4 Population of Health Center and Project Target Catchment Areas).

In addition to targeting HCs and their surrounding communities, the project supported AIDS education efforts at 39 primary schools, 3 secondary schools, and 14 distance education centers (in addition to 25 primary schools targeted in the previous AIDS prevention project). (There are 219 primary schools in Mangochi District. The STAFH Project originally targeted 40 new primary schools, but one was subsequently deemed to be too remote and was dropped.) Family planning education was also included at the secondary level. The school component involved classroom instruction, Edzi Toto (anti-AIDS) clubs, and efforts to reach out-of-school youth.

Other major activities of the project included

- Development of a project information system (PIS) to monitor implementation of planned activities and progress in meeting the project goal and objectives. Data collected by the project's HSAs and trainers were passed on to the project data officer for entry and analysis. The data was reviewed monthly for monitoring and decision-making purposes.
- Support to the Muslim Association of Malawi (MAM) for AIDS prevention education and promotion of child spacing through a variety of Islamic community structures and programs in the district, including madrasas (Islamic religion classes), youth groups, women's groups, marriage counseling by Imams, etc. MAM was given a subgrant to undertake the activities with technical support from SC/US staff. Their accounting section also received in-service financial management training from the SC/US Senior Accountant.
- Operations research on 1) effectiveness of the project's intensive school-based AIDS education activities and 2) effect of different approaches to the delivery of FP services (including CBD) on contraceptive acceptance.
- A subgrant was given to St. Martin's Hospital to renovate an unused building to serve as an integrated FP/STD/MCH facility.

As can be discerned from the above description of project activities, most involved training and follow-on support. A chronological list of training courses conducted by the project is provided in Appendix #3.

ACCOMPLISHMENTS AND UNMET POTENTIAL

As stated above, most of the planned activities involved training and follow-on support, and in most cases the set targets were achieved or exceeded by the end of project. The major activities are listed in the Results Framework (Appendix #5), together with their baseline, target, and end-of-project values.

As shown by the Results Framework, training accomplishments and unmet potential included:

- 33 community-based groups and 39 school-based Edzi Toto (anti-AIDS) clubs were established to provide peer counseling and mobilize their communities to prevent HIV/AIDS
- 657 primary school teachers and headmasters (at 39 target schools) were trained in AIDS prevention. 75 secondary school teachers (at 3 schools and 14 distance education centers) were trained in AIDS prevention and family planning
- 28 HC staff (2 per target HC) were trained in STD syndromic management. They also received refresher training in order to be updated on changes in the national STD treatment guidelines
- 6 HC clinical staff (1 Medical Assistant and 5 nurses from target HCs) were trained in FP provision, in an effort to assure the presence of at least two qualified FP providers at each target HC (except the Malawi Lake Services Clinic, which opted not to initiate FP services at this time). Two additional staff from non-target HCs were also trained in order to support the District as a whole. 10 FP providers received refresher training
- 21 HSAs with specialized training in FP/AIDS, including provision of injectable DMPA, were trained. Of the first batch of 17 HSAs, 5 were co-sponsored and hired by Sable Farming Company, 10 were hired by SC/US and posted to the target HCs. Two dropped out but 4 trained HSAs were recruited from the previous SC/US Child Survival project and given refresher training to become specialized in FP/AIDS. Thus 14 "specialized" HSAs worked for SC/US STAFH, with at least one at each of the 10 targeted public sector HCs
- 129 volunteer FPPs were selected by their communities and trained by SC/US STAFH to assist HSAs with community mobilization for family planning, AIDS prevention, and promotion of STD treatment
- In 8 of the 10 target HC catchment areas, the HSA identified 8 villages in which 2 volunteer FPPs were selected and trained to promote the use of FP services
- 29 volunteer CBDs were trained in 2 of the 10 HC catchment areas, as part of an operations research (OR) study on different approaches to delivery of FP services. They received the standardized government training course for CBDs and they

were managed and supported according to government CBD program guidelines (except for provision of lunch allowance and reimbursement of actual transportation costs to attend monthly meetings)

- 80 Muallims, 39 Imams, 32 Daes and other muslim leaders (see appendix # 6) were trained in FP/STD/AIDS behavior change and communication messages
- The project did not train HSAs and community volunteers in Home Based Care (HBC) as originally proposed. The strategy shifted to working collaboratively with the SC/US Community-based Options for Protection and Empowerment (COPE) project to target community groups instead
- The original plan to work with bar girls and other women who exchange sex for money was also shifted to a separate project. Separate funding was received from the European Union (EU) and World AIDS Foundation for this activity and it is currently being implemented as the AIDS Prevention Practices through Literacy and Empowerment (APPLE) project
- The project did not train HC staff in HBC as originally proposed based on the experience of others that HC staff do not carry out HBC activities even when trained. Instead, the project decided to focus on community-based rather than facility-based HBC through the SC/US COPE project as noted above
- Training of private providers on the hormonal contraception checklist did not take place. The project was unable to schedule this activity prior to completion

In addition to training HC staff in family planning (FP) service provision, the project supplied 9 of the 10 public HCs with various FP equipment. One HC was unable to complete its inventory/request in time to be included in the project's procurement of equipment, but it was able to obtain needed items from the District Hospital

The goal of all trainings conducted under the project was to enhance FP/STD/AIDS knowledge and increase quality, availability, and accessibility to FP/STD/AIDS services. The project's accomplishments and unmet potential for increasing knowledge included

- Primary school youth knowledge of HIV transmission (including sexual transmission) apparently did not reach the 80% target, but there are methodological uncertainties regarding this measurement. The baseline in the school AIDS prevention OR study was 24.1%. The level at the end of the OR in January 1998 was 34.9%. However, a very small, non-scientific knowledge, attitude and practice (KAP) survey undertaken in October 1997 for the mid-term evaluation (MTE) had found 81% had correct knowledge. A better designed repeat "mini-KAP" (with a larger sample size and more schools than in the MTE exercise) carried out during the final evaluation came up with only 59.6%, and this is probably the best estimate of actual achievement in this area. It should be noted that none of these surveys followed a specific cohort of pupils to measure

increased knowledge over time with exposure to AIDS education. In part, the follow-up surveys may be assessing knowledge of younger pupils just reaching the point where their AIDS education includes sexual transmission and missing some of the older students whose knowledge should have increased as a result of exposure to AIDS education.

Accomplishments and unmet potential for quality, availability and accessibility of FP/STD/AIDS services included

- At the end of the project, 8 of 13 service delivery points now have 2 trained FP providers, the same number as at the beginning of the project. The other 5 HCs each have 1 trained FP provider at present. The number actually reached 10 HCs with 2 trained FP providers at the time of the mid-term evaluation, but staff transfers have prevented the project from achieving this objective, despite training of 8 new providers. (The Project trained 6 providers from target HCs that did not have 2 qualified providers in place at baseline, plus 2 more from other HCs in the District.) Reassignment of HC providers was beyond the project's control and was felt necessary by the District Health Management Team (DHMT) to maintain adequate coverage at all MOHP and CHAM facilities in the district. Training more providers under the project might have resulted in more target HCs with at least 2 FP providers at end-of-project, but the more important lesson learned is the need to work closely with the DHMT on a district rather than project level since HC personnel (both MOHP and CHAM) are managed by the District.
- The supply of contraceptives was adequate throughout the project period. Only one remote HC, at Lulunga, reported depletion of stocks of DMPA and condoms, which occurred during the last rainy season when the road was impassable and they were dependent on lake services.
- The project was unable to supply drugs for syndromic management of STDs for HCs in its last year of implementation as a result of procurement problems at JSI-STAFH, the distributor of the STD drugs.
- HC clinicians are providing quality STD management as shown by the final evaluation results. The percentage of genital ulcer disease (GUD) and urethral discharge (UD) syndrome cases correctly treated was found in the final evaluation to be very high when the basic STD drugs are available. When drugs are available, the correct treatment for GUD and UD syndromes is reported in 93.6% and 98.7% of cases respectively.
- 73% of villages in the project catchment areas received HSA outreach visits for provision of FP services in the last quarter of the project. The baseline value was zero.
- The percentage of sexually active primary school youth reporting condom use at last intercourse was 34.2% at baseline, and the target was to increase this by 25% to approximately 43%. Unfortunately, the project was only able to increase condom use to 37%.

- The project's "specialized" HSAs were trained to promote and deliver community based hormonal contraceptive services, including OCs and injectable DMPA. They received the regular, 6-week government-approved HSA training, followed by 2 weeks of additional training in FP and at least 2 weeks of supervised practical work attached to a certified FP provider in order to be certified as approved to administer DMPA. Subsequently, the MOHP determined that HSAs may not give DMPA, and the practice in the project ceased as instructed
- Contraceptive Prevalence Rate (CPR) within the 7.5 km radius of the target health centers has risen from the estimated baseline (district value) of 3.3% to 17.7%, still shy of the 20% target but definitely moving in the right direction. This is based on adjusted estimated number of all women of reproductive age in the 7.5 km catchment areas. If the denominator of married women aged 15-49 is substituted, the CPR increases to 23.6%
- CBDs and HSAs, supported by family planning promoters (FPPs), serve a vital role in attracting first time contraceptive acceptors. Thirty-one percent of new acceptors were served by HSAs and CBDs. HSAs are organizing more outreach clinics together with qualified nurses in order to continue making DMPA injectable contraception more accessible, since the HSAs have been required to cease administering it themselves. The fact that OC use is relatively high and increasing only in project areas served by CBDs (see Appendix #7 Contraceptives Distributed by HSAs and CBDs) suggests that community-level access to contraceptives has improved greatly
- Strong partnerships developed between SC/US and the Ministry of Health and Population, Ministry of Education, and the Muslim Association of Malawi. These partnerships were forged and operationalized mainly at the district level, but they also involved consultation, guidance and support at regional and national levels. Overall, there has been a uniformly positive relationship with these partners and with other responsible agencies, such as the National Family Planning Council of Malawi and the National AIDS Control Program. It is evident that an effective spirit of collaboration and respect was established at all levels, which serves to enhance the value of the project as well as the prospect for building on its accomplishments for future collaboration. The partnership with MOHP has moved on to higher level with the implementation of the CHAPS project. SC/US and MOHP, at district level, will soon be operating from the same office building. Also, as observed by the final evaluation team, "a close and excellent collaborative relationship was noted between SC/US STAFH and the District Education Officer (DEO) and Primary Education Advisors (PEAs). The Acting DEO has been involved since the beginning of the Project, providing a strong sense of continuity. The PEAs (who are zonally based within the District to supervise and support their respective primary schools) have been involved in all aspects of the STAFH Project's activities at target schools and in planning for the phase-out of the Project. One PEA, based at the DEO Office, was also designated as the project focal person."

- The partnership forged with Muslim Association of Malawi (MAM) has been highly successful and provides the basis for follow-on cooperation. A detailed report of the final evaluation of MAM's STAFH subgrant project activities is attached to this document as appendix #8
- MAM has successfully integrated FP/STD/AIDS lessons into the curricula for their madrasas and their youth clubs in secondary schools
- HIV/AIDS and family planning messages have been incorporated into Muslim Friday prayers and marriage counseling and ceremonies
- One MAM activity that was not completed (apparently as a result of some mutual confusion over the original intention, plans and obligations) was the development of Islamic community-specific information, education and communication (IEC) materials on HIV/AIDS and child spacing/family size
- All 14 HCs involved with the project have copies of the latest FP policy and guidelines, procurement and distribution of which was facilitated by the project
- Quality management of STD cases is available at all 14 HCs. All twenty-eight HC providers trained in syndromic management of STDs are still at their posts, thus assuring 2 in each of the 14 target HCs doing STD work. They have all been updated to the recent changes made to the STD syndromic management guidelines
- As noted during the final evaluation of the project, "in-service training of HC staff has resulted in increased FP activity and improvements in the quality of care"
- With their specialized training in FP, including DMPA injections, the SC/US HSAs have been instrumental in increasing access to DMPA, which currently is the most popular method. The MOHP's concerns about the appropriateness of HSAs administering DMPA are understandable, and the project has complied with the Ministry decision to stop the practice. Organizing more nurse-supervised outreach clinics has helped to some extent to maintain access to DMPA within the community, but it fails to match the level of access and confidentiality provided previously by HSAs delivering DMPA at client homes. All indications and reports suggest that the HSAs were well trained and carefully supervised and certified prior to undertaking this practice under the SC/US STAFH project, but no quality of care or adverse event data were systematically collected on the practice under STAFH. The National Family Planning Council of Malawi (NFPCM) would like to further evaluate the practice, which would seem to be potentially very valuable in Malawi, and the SC/US experience in Mangochi may be useful to such a review or to future efforts to assess its safety and appropriateness
- The training and support directed to the schools has been well received and reflects an enormous amount of effort on the part of the SC/US staff. Classroom instruction is being delivered and Edzi Toto clubs are active. Most of the

headmasters, teachers and AIDS patrons are enthusiastic about AIDS prevention, with a much higher comfort level regarding discussion of sexual matters than they had prior to training

- The two OR studies undertaken by the project suffered from design and implementation problems and neither can be considered a great success. The final reports for the two studies are attached to this document as appendices #9 and 10
- The SC/US STAFH project has been constructively and collaboratively phased out in the context of the district-wide CHAPS and School Health and Nutrition (SHN) projects. Under CHAPS, SC/US is supporting a joint initiative with the Government to expand and institutionalize many of the successful activities pioneered in STAFH as well as other activities on a district-wide basis. Most of the SC/US STAFH specialized HSAs have been approved for hiring by MOH (with interim funding support from CHAPS as necessary), and other government HSAs will receive the specialized AIDS and FP training developed by SC/US. Community based distribution of family planning is being expanded in the district, and CHAPS has sponsored three persons to be trained by NFPCM as Mangochi District CBD trainers. The STAFH project CBDs have been transferred to the government program. STD syndromic management training will be provided to other clinicians who are not yet trained throughout the district. The entire district health information system (HIS) will be strengthened under CHAPS. The FP/STD/AIDS education in schools component of STAFH project will expand to cover all primary schools in Mangochi through the SHN Project. The SHN Project will provide an opportunity for further support and expansion in the area of AIDS and family planning education for youth. The partnership between SC/US and MOE is strong, in part as a result of the STAFH experience
- Renovation of an unused building to serve as an integrated FP/STD/MCH facility was completed at St. Martins rural hospital. The building is fully functionally

COMMENTS AND RECOMMENDATIONS

The SC/US STAFH project successfully implemented most of its planned activities and thereby demonstrated the strong institutional capability of SC/US to develop, coordinate, and manage a complex and ambitious program of training and other interventions. The STAFH interventions have contributed to increased contraceptive prevalence and AIDS prevention in a large part of Malawi's Mangochi District. Moreover, it has helped to establish strong partnerships with government and community organizations (at all levels), upon which SC/US is now able to build and expand its role in the District.

The very long list of training courses (Appendix #3) organized and conducted by the SC/US STAFH project staff attests to the SC/US capacity to systematically implement an ambitious, multifaceted, and logistically complex workplan. It further adds to the SC/US institutional capability to manage similar programs in Malawi in the future.

Measuring outputs (intermediate results) is always easier than measuring impact and the absence of baseline and end-of-project data collection in the design of this project was a limiting factor in assessing ultimate results. The project did a good job of establishing baseline values and constructing a project health information system in order to monitor and assess progress. However, more attention should have been given to interim project monitoring and analysis needs rather than mainly cumulative reporting on progress towards end of project (EOP) targets.

For measuring the impact of the project's intensive school AIDS education intervention, it would have been interesting to monitor human immunodeficiency virus (HIV) seroprevalence or a proxy indicator such as syphilis prevalence among the target age group. While there appears to be improvement in youth knowledge, attitudes and practices overall, this could not be conclusively documented through the related operations research.

Syndromic management of STDs at all target HCs has been implemented as a result of the training and support provided by the project. A review of HC records indicates correct application of the national STD treatment guidelines when STD drugs are available, but that neither the project nor the health could always assure regular supply.

Although there was no opportunity for continued funding of the SC/US STAFH project beyond its scheduled September 30, 1998, completion date, SC/US will continue to work with its partners in Mangochi District to improve reproductive health under a USAID-funded CHAPS grant. The initiation of the CHAPS Project and a planned School Health and Nutrition initiative by SC/US in Mangochi District provide the opportunity to build on the STAFH lessons and experience to achieve further progress in AIDS and family planning and greater sustainability of these efforts.

The following recommendations are offered in the context of this continued work by SC/US in Mangochi district and elsewhere:

- Future projects of this type would benefit from inclusion of baseline and follow-up data collection to better assess progress towards achieving stated results. If possible, project monitoring should be based on routine data collection by the District rather than through the establishment of a parallel project HIS. If necessary, strengthening of the district systems should be part of the project purpose and design. (It should be noted that this lesson has already been applied by SC/US in the CHAPS project, which has a strong monitoring and evaluation component, including baseline and follow-up surveys, and a strong focus on strengthening and utilizing the district HIS.)
- Indicators are needed to measure all expected results.
- To maximize sustainability, projects of this type should be designed as joint efforts with host institutions rather than stand-alone projects. To the extent possible, SC/US should focus on strengthening capacity of local partners to deliver services.

on a sustained basis (Again, it is noted that CHAPS is focusing on strengthening the capacity of local partners and is more of a joint initiative with the District than stand-alone project)

- In Mangochi District, SC/US should pursue opportunities for further collaboration with MAM to build on the momentum and accomplishment of past cooperation
- The issue of health surveillance assistants (HSAs) administering DMPA deserves further consideration by the Ministry. The practice was supported and informally approved by the District Health Officer (DHO) as an innovative, experimental approach in the SC/US STAFH project. Given the popularity of Depo-medroxyprogesterone Acetate (DMPA) as a contraceptive method in Malawi, the NFPCM is interested in the potential impact of HSAs delivering DMPA if it can be demonstrated to be safe and effective. The SC/US STAFH experience (prior to termination of the practice in the project) appeared to be very good, but data were not systematically collected on side effects or other problems. Treating this as a research question might be an interesting option in order to allow a careful, formally approved evaluation of the practice without contravening current MOHP policy or assuming future policy change. SC/US is currently in dialogue with NFPCM, MOHP headquarters and Banja La Mstogolo (BLM) to develop an operations research activity on this issue.

NARRATIVE FISCAL REPORT

SC/US STAFH project grant funds were fully expensed by the end of the project period. As the project focussed heavily on training, the largest portions of the expenditures were for the training costs and for the management, training and support personnel that are required to make the training happen. Of total project expenses, 14.3% were for training, including related materials and supplies, transportation, accommodation and meals, incidentals and other support costs. The training costs also include the subgrant to the Muslim Association of Malawi as it was totally for training activities.

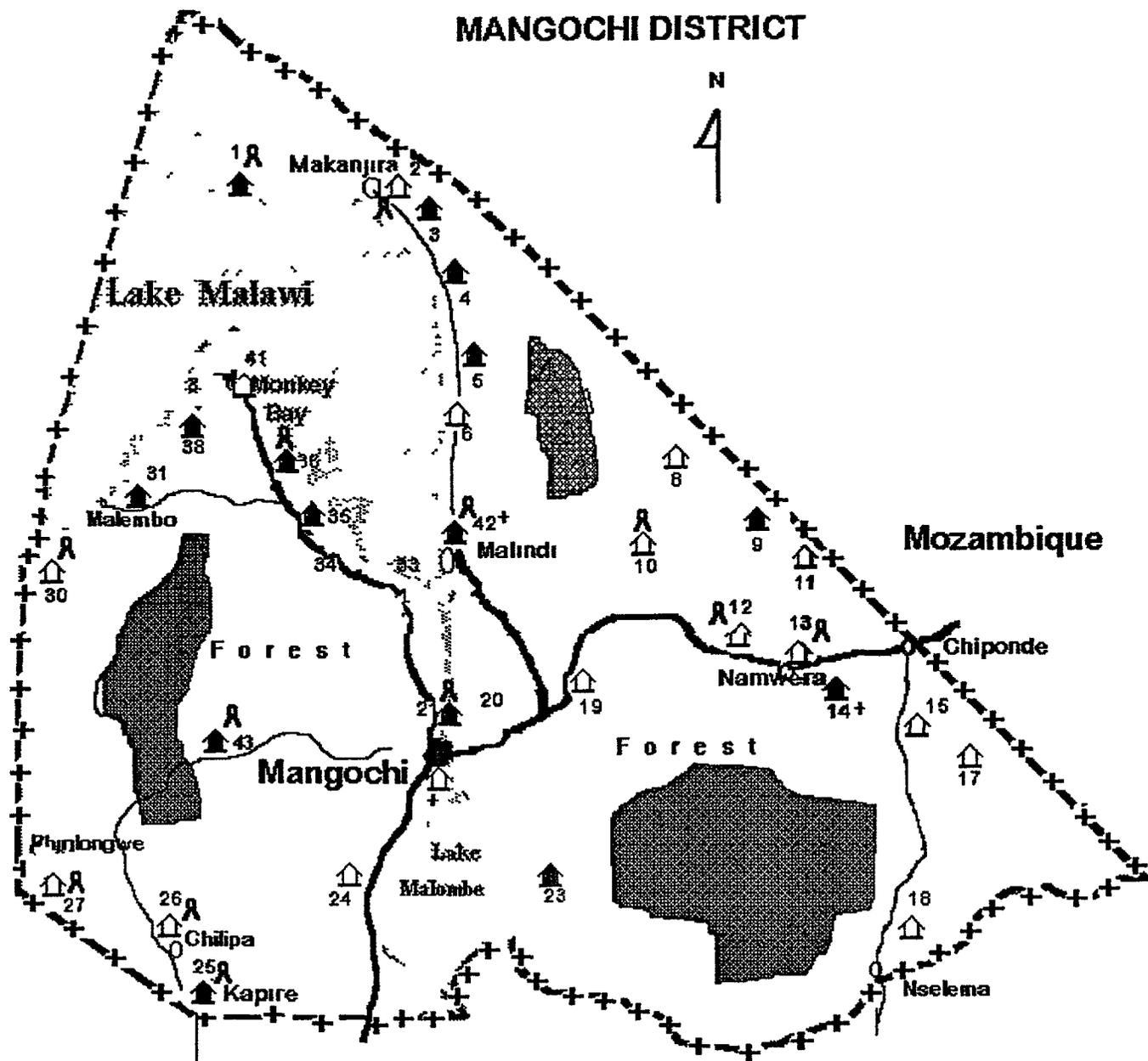
Salaries and fringe for project staff accounted for 38.7% of total project expenses. Project staff positions included the Project Coordinator, the Senior Health Trainer, project trainers, HSAs, community mobilizers, the Data Manager, and percentages of the expatriate Health Program Manager and Finance Manager.

Project supplies and equipment, including non-expendable assets, comprised 6.9% of project expenses, while general operating costs were 8.2%. The total for the grant Other Direct Costs budget element, which is composed of training, project supplies and equipment, and general operating costs, totaled 25% of overall expenditures. Charges for the Travel and Per Diem cost element accounted for 8.0% of total costs. The balance of 21.4% of project expenses covered the SC/US indirect costs.

In summary, grant funds were expended by cost element at approximately the following percentage rates of total

COST ELEMENT (USAID)	PERCENT OF TOTAL EXPENSES
Labor	26.3
Fringe Benefits	12.4
Supplies/Equipment	6.9
Travel/Per Diem	8.0
Other Direct Costs	25.0
Indirect Costs	21.4

Grant matching funds were applied to associated SC/US activities in Mangochi District including additional efforts in teacher training and supervision and related educational activities. The SC/US headquarters will submit the final financial report for the project in the form of an SF269 that will provide total expenditure amounts for both the federal share of the project and the match.



KEY (attached list of names)	
	District Boundary
	Main Road
	Other Roads
	District Headquarters
	Important Town
	PHAM Clinic/Health Cent.
	Save the Children activities
	Government Health Cent
	Water (Lake)

1 Lulanga	7 Sable Chuz	13 Namwera	19 Chilonwe	25 Kapire	35 Koche
2 Makanjira		14 Sister Martha H		26 Chilpa	36 Mkope
3 Lugola		15 Nanchoh	21 Mpondasi	27 Phiri-longwe	38 Nankwali
4 Namalaka	10 Katuli		23 Mase		41 Monkey Bay
6 Lungwena	11 Chumbangame	17 Lumeta	24 Kukalanga	30 Nankumba	42 Malindi
	12 Jalasi	18 Nkumba		31 Mlemba	43 Katema

Appendix # 2: Mangochi District Health Facility Administrative Authority, STAFH Project Participation and FP Provision

		ADMINISTRATIVE AUTHORITY	STAFH PARTICIPANT	FP SERVICES
1	BLM Clinic	NGO		√
2	Chiripa Health Center	Local Government		√
3	Chrumbagame Health Center	MoHP		√
4	Chowe Health Center	MoHP		
5	Jalasi Health Center	MoHP	√	√
6	Kapire Health Center	Catholic		
7	Katema Health Center	Catholic		√
8	Katuli Health Center	MoHP	√	√
9	Koche Health Center	Catholic		
10	Kukalanga Health Center	MoHP		√
11	Lugola Health Center	Catholic		
12	Lulanga Health Center	Anglican	√	√
13	Lumeta Health Center	MoHP		
14	Lungwena Health Center	MoHP		√
15	Makanjira Health Center	MoHP	√	√
16	Malawi Army Navy Unit Clinic	Malawi Army	√	√
17	Malawi Lake Services Clinic	Malawi Lake Services	√	
18	Maldeco Fisheries Clinic	Maldeco Fisheries	√	√
19	Malembo Clinic	CCAP		√
20	Mangochi District Hospital	MoHP		√
21	Mase Health Center	Catholic		
22	Mkope Health Center	Anglican	√	√
23	Mkumba Health Center	MoHP		√
24	Monkey-Bay Health Center	MoHP	√	√
25	Mpondasi Health Center	Anglican	√	√
26	Namalaka Health Center	Catholic		
27	Namkumba Health Center	MoHP	√	√
28	Namwera Health Center	MoHP	√	√
29	Nancholi Health Center	MoHP		
30	Nankwali Health Center	Catholic		
31	Phiri-longwe Health Center	MoHP		√
32	Sable Clinic, Ngapani	Sable Farming Co	√	√
33	Sr Martha Hospital	Catholic		
34	St. Martin's Hospital, Malindi	Anglican	√	√

Source STAFH Project HIS

Appendix #3 List of SC/US-STAFH Training Courses

1996

No	DURATION	TRAINING TYPE	TRAINING CONTENT	PLACE OF TRAINING	NO OF PARTICIPANTS
1	18 Feb-15 March 1996	HSA Training	Official Curriculum	Save the Children	17 HSAs - Sable Farming
2	27-19 March 1996	Primary School Tier 1 Training	HIV/AIDS, Peer Counseling and Adolescent Health & HBC	Monkey Bay	20 Teachers
3	3 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Monkey Bay	34 Teachers
4	4 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	St Lois	19 Teachers
5	10-11 April 1996	Primary School Tier 1	HIV/AIDS,HBC & Peer Counseling	Namwera	20 Teachers
6	10 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Nkhuzi-Bay	6 Teachers
7	11 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Cape Maclear	9 Teachers
8	12 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Bwadzulu	13 Teachers
9	16 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Chungwenya	10 Teachers
10	17 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Chowe	16 Teachers
11	18 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Kwiputi	12 Teachers
12	30 April 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Majuni	18 Teachers
13	1 May 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Masongola	22 Teachers
14	6-10 May 1996	Muallim Training	HIV/AIDS,HBC Counseling & FP	Chirwaula	20 Muallims
15	13- 6 May 1996	Medical Training	S T D	Save the Children	14 Medical Assistants
16	20-23 May 1996	Nurses Training	S T D	Save the Children	1 Enrolled Nurse
17	27-31 May 1996	Muallims Training	HIV/AIDS,HBC & Peer Counseling, FP		13 Nurses
18	29-30 July 1996	PEAS Training	HIV/AIDS, HBC Counseling	Save the Children	9 Advisors/2 female
19	31 July-2 August 1996	PSI Training	Chishango Condoms	MALDECO	14 HSAs- 5 Supervisor
20	7-8 August 1996	Primary School Tier 1	HIV/AIDS,HBC & Peer Counseling	Save the Children	20 Teachers
21	21-22 August 1996	Primary School Tier 1	HIV/AIDS,HBC & Peer Counseling	Mpilipili(Makanjira)	16 Teachers
22	23 August 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Koche	35 Teachers
23	28 August 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Lulanga	8 Teachers
24	29 August 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Mpilipili & Chumbya	20 Teachers
25	30 August 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Lugola	6 Teachers
26	30 August 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Samama	21 Teachers
27	28 August 1996	Primary School Tier 2	HIV/AIDS HBC & Peer Counseling	St Augustine	40 Teachers
28	2 September 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Chipalamawamba	16 Teachers
29	3-5 September 1996	Community Group	HIV/AIDS,HBC & Peer Counseling	Naval Unit	22- 15 men/7 women
30	4 September 1996	Primary School Tier 2	HIV/AIDS,HBC & Peer Counseling	Chikomwe	4 Teachers

31	2-3 September 1996	Primary AIDS TOTO	HIV/AIDS,HBC & Peer Counseling	Chingwenya	23 Peers
32	2-6 September 1996	Primary AIDS TOTO	HIV/AIDS,HBC & Peer Counseling	Chowe	25 Peers
33	10-12 September 1996	Community Group	HIV/AIDS,HBC & Peer Counseling	Naval Unit	17-12 men & 5 female
34	23-18 October 1996	HSA Training	Official Curriculum	Save the Children	15 HSAs(4 Sable Farming
35	16-17 October 1996	Primary AIDS TOTO	HIV/AIDS,HBC & Peer Counseling	Lugola	22 Peers
36	22-23 October 1996	Primary AIDS TOTO	HIV/AIDS,HBC & Peer Counseling	Chikomwe	26 Peers
37	18-29 November 1996	CBD Training	Family Planning & Counseling	Lisumbwi Sec School	29- 4 HSA, 3men, 22 Women

1997

No	DURATION	TYPE OF TRAINING	TRAINING CONTENT	PLACE OF TRAINING	NO. OF PARTICIPANTS
1	6-10 January 1997	Muallim Training - (Haraqa group)	HIV/AIDS, HBC, Peer Counseling,FP,STD	Chrwaula	33, 10 Men and 24 Women
2	21-22 January 1997	Primary AIDS TOTO	HIV/AIDS, HBC, Peer Counseling, STD	Mbwadzulu	28 Peers
3	11-13 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling and STD	Koche	30 Peers
4	13/15/17 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling and STD	Cape Maclear	24 Peers
5	19-21 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling and STD	St Lois	25 Peers
6	19-21 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling and STD	Monkey Bay	26 Peers
7	19-21 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	Chipalamawamba	25 Peers
8	19- 21 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	St. Augustine III	25 Peers
9	26-28 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	Nkuzi Bay	28 Peers
10	26-28 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	Majuni	28 Peers
11	26-28 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	Masongola	26 Peers
12	26-28 February 1997	Primary AIDS TOTO	HIV/AIDS Peer Counseling	Kwiputi	30 Peers
13	10-11 March 1997	Muallims Orientation	HIV/AIDS and Family Planning	Save the Children	10 7 men and 3 Women
14	12-14 March 1997	Primary AIDS TOTO	HIV/AIDS and Family Planning	Chimbiya	25 Peers
15	12-14 March 1997	Primary AIDS TOTO	HIV/AIDS, Peer Counseling, and STD	Lulanga	30 Peers
16	12-14 March 1997	Primary AIDS TOTO	HIV/AIDS, Peer Counseling, & STD	Mpilipili	20 Peers
17	18-20 March 1997	Primary AIDS TOTO	HIV/AIDS, Peer Counseling, & STD	Samama	27 Peers
18	2-4 April 1997	Community Group	HIV/AIDS,Peer Counseling, FP & STD	MALDECO	20 (14 men and 6 Women)

19	8-12 April 1997	Muallims Training	HIV/AIDS, Peer Counseling, FP & STD	Namwera	24 men
20	14-16 April 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Monkey Bay L Service	22 -(10 men and 12 women)
21	29 April-3 May 1997	Muallims Training	HIV/AIDS, Peer Counseling, FP & STD	Chirwaula	20 men
22	12-14 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Nasenga	31 (8 men and 23 Women)
23	5-7 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Chowe	23 (10 men and 13 Women)
24	13-15 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Monkey Bay (Masasa)	18 (5 men and 13 Women)
25	20-22 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Mpunganjira	24 (10 men and 14 Women)
26	20-22 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Katuli	25 (18 men and 7 women)
27	23 May 1997	Chiefs Orientation	HIV/AIDS, Peer Counseling, FP	Monkey Bay	14 Chiefs
28	27-29 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Namwera (Chutula)	27 (8 men and 19 Women)
29	27-29 May 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Chikomwe	25 Women
30	3-5 June 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Nkuzi Bay	14 (7 men and 7 Women)
31	10-12 June 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Makanjira	20 (10 Men and 10 Women)
32	10-12 June 1997	Community Group	HIV/AIDS, Peer Counseling, FP & STD	Luwesa (Malamia/Makanjira)	20(15 Men and 5 Women)
33	19 June 1997	Chiefs Orientation	HIV/AIDS, STD and Family Planning	Namwera (Jalasi)	40 (Chiefs)
34	24-25 June 1997	Community Group	HIV/AIDS, STD and Family Planning	Mangochi (WAGA)	27 Women
35	24-25 June 1997	Community Group	STD and Family Planning	Monkey Bay Naval Unit	38
36	? July 1997	Chiefs Orientation	HIV/AIDS, STD and Family Planning	Katuli	26 Chiefs
37	4-5 July 1997	Community Group	HIV/AIDS, STD and Family Planning	Matewere	30 (23 Men and 7 Women)
38	9 July 1997	Chiefs Orientation	HIV/AIDS, STD and Family Planning	Makanjira	21 Chiefs
39	10-11 July 1997	FPP Training	HIV/AIDS, STD and Family Planning	Makanjira	19 (10 Men and 9 Women)
40	10-11 July 1997	FPP Training	HIV/AIDS, STD and Family Planning	Namwera	16 (9 Men and 7 Women)
41	10-11 July 1997	FPP Training	HIV/AIDS, STD and Family Planning	Jalasi	16 (8 Men and 8 Women)
42	8-9 July 1997	FPP Training	HIV/AIDS, STD and Family Planning	Katuli	15 (6 Men and 9 Women)
43	14-16 July 1997	Community Group	HIV/AIDS, Peer Counseling FP & STD	Sable Farming	18 (14 Men and 4 Women)
44	17-19 July 1997	Community Group	HIV/AIDS, Peer Counseling FP & STD	Sable Farming	19 (20 Men and 16 Women)
45	24-25 July 1997	Community Group	HIV/AIDS, Peer Counseling FP & STD	Katuli	36 (20 Men and 16 Women)
46	30-31 July 1997	Community Group	HIV/AIDS, Peer Counseling FP & STD	Nankumba	20 (15 Men and 5 Women)

47	16-18 July 1997	Community Group	HIV/AIDS, Peer Counseling FP & STD	Namusi	30 Women
48	6 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	St Michael's Sec School	30 (25 Men and 5 Women)
49	6 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	Mangochi Sec School	25 (18 Men and 7 ladies)
50	7 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	Kapire DEC	16 Teachers Men
51	7 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	Namwera DEC	17 (16 Men and 1 lady)
52	8 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	Mangochi Sec School	22 Teachers
53	8 August 1997	Sec teacher Orientation	HIV/AIDS, STD Peer Counseling & FP	Lisumbwi Sec School	29 (25 Men and 4 Women)
54	18- 22 August 1997	HSA refresher Training	Official Curriculum	Save the Children	19 (11 Women and 8 Men)
55	30 August 1997	HSA Orientation MOH	Family Planning & CBD Supervisor	Monkey Bay L Service	4 (3 Men and a lady) HSA
56	3-4 September 1997	Community Group	HIV/AIDS, STD Counseling & FP	Namusi	25 Women
57	1-6 September 1997	CBD refresher Training	Family Planning and Counseling	Monkey Bay L Services	27 CBDs 5 Men & 22 Women and 9 HSAs
58	5-7November 1997	St. Michaels Sec School	HIV/AIDS, STD,FP,HBC & Counseling	St. Michaels Sec School	26 (5Men & 21 Women)
59	18-20 November 1997	Sec School Teachers Train	HIV/AIDS, STD,FP, BC & Counseling	Mangochi Sec School	
60	18-20 November 1997	Sec School Teachers Train	HIV/AIDS, STD,FP, BC & Counseling	Lisumbwi Sec School	26 (9 Women & 16 Men)
61	24-26 November 1997	Sec School Teachers Train	HIV/AIDS, STD,FP,HBC & Counseling	Mangochi Sec School	20 (2 ladies & 18 Men)
62	24-26 November 1997	Sec School Teachers Train	HIV/AIDS, STD,FP,HBC & Counseling	Namwera	24 (23 Men & a lady)
63	18-22 November 1997	Community Group NACC	HIV/AIDS, STD, and Family Planning	Namwera (NACC)	32(20 Men & 12 Women)
64	24-28 November 1997	Community Group NACC	HIV/AIDS, STD, and Family Planning	Namwera	32 (16 Men and 16 Women)
65	9-13 December 1997	Community Group	HIV/AIDS, STD and Family Planning	Namwera	29 (17 Men &12 Women)

1998

No.	DURATION	TYPE OF TRAINING	CONTENT OF TRAINING	PLACE OF TRAINING	No. OF PARTICIPANTS
1	20t-22 January 1998	Out of School Youth	HIV/AIDS, STD, FP, & Counseling	Mangochi Comm Hall	13 (6 Girls & 7 Boys)
2	5-7 February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	Mangochi Sec School	27 (Boys)
3	5-7 February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	St. Michaels Sec School	26 (Girls)

4	5-7 February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	Lisumbwi Sec School	28 (12 Boys and 18 Girls)
5	13-15 February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	St Monica DEC	20 (10 Girls and 10 Boys)
6	13-15 February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	Namwera	12 (6 Boys and 6 Girls)
7	13-15th February 1998	Sec School AIDS TOTO	HIV/AIDS, STD, FP, & Counseling	Chilipa	16(8 Boys & 8 Girls)
8	24-26 February 1998	Primary School Tier 1	HIV/AIDS, STD, Couns & Teach Tech	Monkey Bay	28 (14 Men and 14 ladies)
9	24-26 February 1998	Primary School Tier 1	HIV/AIDS, STD, Couns & Teach Tech	MALDECO	28(15 Men and 14 ladies)
10	10-12 March 1998	Primary School Tier 1	HIV/AIDS, STD, Counseling, Teach Tech	Namwera	24(20 Men & 4 Women)
11	17 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling, Teach Tech	Mpale	11 (9 Men and 2 Ladies)
12	17 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling, Teach Tech	Changali	16 (11 Men and 5 Ladies)
14	18 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling, Teach Tech	Lungwena	12 (8 Men and 4 Ladies)
15	18 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling, Teach Tech	Mtengeza	10 (6 Men/4 Ladies)
16	18 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling	Thema	4 (2 Men and 2 Ladies)
17	19 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Sangadzi	15 (10 Men/5 Women)
18	19 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Chimbende	13 (9 Men/4 Women)
19	19 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Malindi	21 (12 Men/9 Ladies)
20	20 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Nasite	8 Men
21	23 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Malembo	12 (6 Men/6 Women)
22	23 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Mdinde	7 (6 Men/1 Woman)
23	23 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Ngapani	6 (3 Men/6 Women)
24	24 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Nankhwali	12 (8 Men /4 Ladies)
25	25 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Luwalika	5 Men only
26	25 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Nchokoza	3 Men
27	26 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Mtuwa	12 (11Men and 1 lady)
28	26 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Malukula	25 (22 Men and 3 ladies)
29	26 March 1998	Primary School Tier 2	HIV/AIDS, STD, Counseling,	Ntonda	17(17 Men &1 Woman)
30	20-22 April 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Malindi	30 (11 Men/19 Girls)
31	20-22 April 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Chimbende	29 Peers(19Boys/10 Girls)
32	20- 22 April 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Malukula	30 Peers

33	20-22 April 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Mtuwa	28 Peers
34	4-6 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Ntonda	30 Peers
35	4-6 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Ulande	26 Peers
36	4-6 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Nkope	30 (13 Boys/17 Girls)
37	4-6 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Nankwali	30 Peers
38	11-13 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Luwalika	27 (12 Boys/15 Girls)
39	11-13 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Mchokola	30 (19 Boys/11 Girls)
40	11-13 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Mdunde	25 (17 Boys/8 Girls)
41	11-13 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Ngapani	30 (12 Boys/18 Girls)
42	18-20 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Lungwena	30 (19 Boys/11 Girls)
43	18-20 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Nasite	28 (9 Boys/19 Girls)
44	18-20 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Changali	30 (10 Boys/20 Girls)
45	18-20 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Mpale	30 (15 Boys/15 Girls)
46	26-28 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Nsangadzi	30 (18 Boys/12 Girls)
47	26-28 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Malembo	30 (10 Boys/20 Girls)
48	26-28 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Thema	30 7 Boys/23 Girls
49	26-28 May 1998	Primary AIDS TOTO	HIV/AIDS, STD & Peer Counseling	Mtengeza	(30) -15 Boys and Girls
50	1 July 1998	Chiefs Orientation	HIV/AIDS, STD, FP & Counseling	Mpondasi	18 (5 Women/13 Men)
51	23 July 1998	Family Planning Promoter	HIV/AIDS, STD, FP & Counseling	Mpondasi	16 (12 Women/4 Men)
52	7 July 1998	Chiefs Orientation	HIV/AIDS, STD, FP & Counseling	Malindi	21 Men
53	8-9 July 1998	FPP Training	HIV/AIDS, STD, FP & Counseling	Malindi	16 (4 Men/12 Women)
54	14 July 1998	Chiefs Orientation	HIV/AIDS, STD, FP & Counseling	Lulanga	16 Men
55	15-16 July 1998	FPP Training	HIV/AIDS, STD, FP & Counseling	Lulanga	15 (9 Men/6 Women)
56	21 July 1998	Chiefs Orientation	HIV/AIDS, STD, FP & Counseling	Nkope	15 Men
57	22-23 July 1998	FPP Training	HIV/AIDS, STD, FP & Counseling	Nkope	16 (5 Men/11 women)

Appendix 4 Population of Health Center and Project Target Catchment Areas (projected from 1987 census by an annual growth rate of 3.2%)

Health Center	Health Center Catchment Area	STAFH Project 7.5 km radius (Project Target Area)
Monkey bay	18,572	13,949
Namkumba	23,938	5,758
Mkope	29,246	10,765
Namwera	32,746	20,406
Mpondasi	16,956	13,359
Jalasi	26,204	22,001
Lulanga	15,283	9,515
Makanjira	30,823	21,534
Katuli	76,820	23,179
St. Martin's Malindi	24,842	21,623
Total Population	295,430	162,089
Women aged 15-49	64,995	35,659
Women living with a man	48,746	26,745

Women Practicing FP by the end of the project: 6,321

Appendix # 5 Results Framework of SC/US-STAFH Project Objectives, Indicators, and Performance

Note: Project information System based on project target area within 7.5 km radius of target health centers

1.1	RESULT	INDICATOR	TARGET	BASELINE	MID-TERM	END OF PROJECT
	Increase use of Family Planning/ STD/ HIV services and behaviors that reduce risk of HIV	• Prevalence of modern contraceptive use (CPR) within 7.5 km radius of target health center	20%	3.3%*	11.1%* 15.8%**	17.7%* 23.6%**
		• Number of continuing family planning users	not an end of project indicator	N/A	3,900	6,321
		• Couple years of protection - Health Center - Health Surveillance Assistants - CBD Agents	not an end of project indicator	N/A N/A N/A	2,161 381 N/A	4,714 850
		• # of STD clients diagnosed and treated according to STD Syndromic Management Guidelines - diagnosed - treatment	not an end of project indicator	0 0	5,514 5,380	9,768 9,645

* CPR calculations for project target area (within 7.5 km radius of HCs) with denominator = all women aged 15-49

** CPR calculations for project target area (within 7.5 km radius of HCs) with denominator = all currently married women aged 15-49 (as used by Government of Malawi)

NOTE For comparison, the following CPR calculations are based on entire Health Center catchment area populations

	Midterm	End of Project
- with denominator = all women aged 15-49	6.1%	9.7%
- with denominator = all currently married women aged 15-49	8.2%	12.9%

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1 2	INTERMEDIATE RESULTS	INDICATOR	TARGET	BASELINE	MID-TERM	END OF PROJECT
	Enhanced FP/ AIDS knowledge and increased quality, availability, and access to FP/ STD Services					
1 2 1	Family Planning	<ul style="list-style-type: none"> # of service delivery points with at least 2 trained service providers in place 	13	8	10	8 *
		<ul style="list-style-type: none"> # of commercial outlets where Chishango condoms available 	200	0	127	PSI took over
		<ul style="list-style-type: none"> % of HCs with no stock-out of contraceptives supplies (condoms, OCs, injectables, VFTs) in last year 	80 %	N/A	30 %	50% **
		<ul style="list-style-type: none"> % villages in catchment areas, receiving HSA outreach visits for OCs/DMPA in last quarter 	Not an end of project indicator	0 %	60%	73%
1 2 2	HIV/AIDS	<ul style="list-style-type: none"> % of primary school youth (12+ yrs old) in target schools who know 3 ways to prevent HIV transmission (including a sexual transmission mode) 	80 %	24 1 % (KAP)	81% (mini-KAP) †	34 9% (KAP) 59 6% (mini-KAP) † †
		<ul style="list-style-type: none"> Increase in proportion of primary school students using condom during last sexual act 	43%	34 2	40 % (mini-KAP)	37 0% (KAP) 13 6% (mini-KAP)
1 2 3	STDs	<ul style="list-style-type: none"> % of cases of genital ulcer and urethral discharge treated according to STD Syndromic Management Guidelines <ul style="list-style-type: none"> - genital ulcer disease - urethral discharge 	80 % 80 %	0 0	87 5 % 80 2 %	93 6% # 98 7%
		<ul style="list-style-type: none"> Percent HCs with no stock-outs of recommended drugs for treating genital ulcer and urethral discharge syndromes 	Not an end of project indicator	N/A	HIS forms do not capture this information specifically	HIS forms do not capture this information specifically

* Affected by staff transfers, managed by District Health Office and beyond the project's control

** Actual results may be higher, as some HCs report "stock-outs" when inventories fall below re-order level only

† MTE "mini-KAP" results based on very small, non-random sample (n=75)

†† Final evaluation "mini-KAP" more representative, with n=240

Score for 8 HCs, excluding Jalasi (information not available) and St Martin's (erythromycin drug stock-out) If St Martin's is included, GUD score falls to 50 3% correct

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1 3	ACTIVITIES	INDICATOR	TARGET	BASELINE	MID-TERM	END OF PROJECT
1 3.1	Community mobilization in 10 HC catchment areas	• # of community based groups providing peer counseling in HIV/AIDS, STDs and FP	30	0	20	33 (24 p/grp)
		• # of Muallims trained in HIV/AIDS, STDs and FP	92 *	0	73	80
		• # of HSAs and lead community volunteers trained in AIDS counseling and HBC support		0	moved to COPE†	moved to COPE†
		• # of bar girls and women's support groups active		0	moved to APPLE ††	moved to APPLE ††
1.3.2	School AIDS Prevention and Family Planning	• # of primary school teachers trained in AIDS prevention	400	0	370	657
		• # of secondary school teachers trained in AIDS prevention and family planning	75	0	0	121
		• # of primary and secondary school students trained to be peer counselors in HIV/AIDS/STDs (+ FP in sec schools)	900	0	493	1,248 (142 sec stu)
1 3 3	Training of Health Center staff to improve services	• # of HC staff trained in Syndromic management of STDs	28	0	26	28
		• # of HC clinical staff trained in FP provision	6-10	0	6**	6**
		• # of HC clinical staff provided with refresher training for FP Provision	15-20	0	0	10
		• # of HC staff trained in providing AIDS counseling programs in communities		7	canceled	canceled
		• # of HC staff trained to support Home Based Care programs in the community		3	canceled	canceled
		• # of private providers trained in Hormonal Checklist	8	0	0	0
		• # of HCs provided with FP equipment	10	0	0	9
1.3 4	Community Based Distribution of contraceptives	• # of HSAs with specialized training in FP/AIDS	10	0	21	21
		• # of CBD volunteers trained	30	0	29	29
		• # of FP promoters trained	128	0	66	129

* The original target was higher than the actual number of Muallims in the project impact area, all of whom were trained as planned Revised target = 80

** 2 additional FP providers were trained from non-target HCs as well

† SC/US-STAFH collaborated with and supported SC/US's COPE Project in this area

†† The APPLE Literacy project targets single women including bar girls through the establishment of literacy / support groups, funded by EC

Appendix #6: Summary of Status of MAM Subgrant Project Activities

	OBJECTIVE	ACTIVITY	TARGET	END-OF-PROJECT	COMMENTS
1	Integrate HIV/AIDS/FP lessons in Madrassas	Train Muallims	80	80	Original target of 93 revised downward to coincide with actual number of MAM Muallims in project area
2	Counseling for AIDS prevention and child spacing as part of official marriage ceremonies	Train Imams	40	39	
3	Integrate HIV/AIDS/FP activities in Ziyalas for out-of-school youth	Train male Daees	14	9	Daees provide IEC to Ziyala club members
		Train female Daees	12	23	
		Form/train out-of-school youth clubs	3	3	Clubs active in Likala, Chiwaula, and Changamire
		Conduct Ziyala gatherings	12	4	Target was to hold 2 Ziyalas per area every 6 months Actual accomplishment was 1 Ziyala held in 4 areas only
4	Integrate HIV/AIDS/FP activities in 12 school religious clubs	Train school youth group Patrons	12	12	
		Train school youth group chairpersons	12	12	
5	Integrate HIV/AIDS/FP in Dawa women's activities	Train women leaders	14	16	Women leaders trained as facilitators of discussions HIV/AIDS/STDs and FP
		Revive and strengthen Halaqa groups	4	3	3 groups revived, conducted >200 meetings
6	Integrate FP and STDs/HIV/AIDS information into curricula	Develop new IEC materials for use in madrassas, schools, women's groups, and other gatherings	YES	NO	MAM used existing religious materials and health education materials available from HCs There was some confusion regarding the intention and need for the original objective of developing new IEC materials
		Utilize existing materials and traditional teaching methods in madrassas, schools, women's groups, and other gatherings	YES	YES	

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Appendix # 7 Contraceptives Distributed by HSAs and CBDs

Health Center	July-December 96		January-June 97		July-December 97		January-June 98	
	OCs	DMPA	OCs	DMPA	OCs	DMPA	OCs	DMPA
Jalasi	40	0	176	2	151	13	32	36
Lulanga	118	71	50	244	50	151	16	99
Katuli	274	0	140	6	49	16	26	27
Namwera	139	5	148	21	104	67	105	90
Monkey Bay*	4	19	138	39	422	73	476	48
Namkumba*	18	4	192	15	451	45	506	70
Mkope	46	31	64	59	16	67	20	98
Mpondasi	24	85	74	88	46	88	65	222
St Martin's Hospital	28	24	60	74	45	111	142	434
Makanjira **	0	0	0	0	0	0	18	8
Total	691	239	784	825	514	631	461	1132

* CBD catchment areas (Namkumba and Monkey Bay) Approximately 76% of OCs are provided by CBDs

** Makanjira HSAs and CBDs started providing FP services in March 1998, after research phase (during which they only did promotion of HC services)

APPENDIX # 8

Final Evaluation Report

for

Muslim Association of Malawi STAFH Subgrant

by

Richard Mason

**STAFH Project Intern
from University of North Carolina at Chapel Hill**

July 1998

Introduction

Use of modern methods of family planning among married Malawian women was estimated at 14% for the country as a whole according to the 1996 MKAPH. In Mangochi District, however, the contraceptive prevalence rate was reported at 3.3% in 1995 by the district health office. Several factors can contribute to low rates of current contraception including the desire for children, disapproval of husbands, fear of side effects and lack of knowledge about methods (DHS 1996). In Mangochi District, where approximately 80% of the population is Muslim, these factors are exacerbated by traditional opposition to family planning among this religious group.

Rising rates of HIV/AIDS infection are a growing problem across Africa and specifically within Malawi. Women of reproductive age are particularly vulnerable and seroprevalence surveys in Mangochi District antenatal clinics have found rates of infection as high as 37%. This trend is created by a mix of forces, including high rates of STD infection, traditional practices encouraging early and extramarital sex, unsafe circumcision procedures, and low rates of condom usage for family planning due to a desire for children, male opposition and social stigmas equating condom usage with prostitution and infidelity.

The Koran, the principle religious text of Islam, provides clear support for a minimum child spacing of 2 years. The Koran also strongly encourages abstinence and monogamy by forbidding pre- and extra-marital sex. Several models of behavioral change have been applied to the area of reproductive health decision-making. Among these, the Theory of Reasoned Action, the Health Belief Model and others have highlighted and demonstrated the importance of influential others on decision-making. Such figures include religious and other community leaders. Program activities carried out through the MAM subgrant of the STAFH Project have been premised on the belief that messages encouraging the use of family planning for child spacing and discouraging pre- and extra-marital sex are more likely to be acted on if they are rooted in the religious beliefs and delivered by influential members of the religious community in Mangochi District.

Save the Children Federation (US) (SC/US) partnered with the local branch of the Muslim Association of Malawi (MAM) to implement HIV/AIDS prevention and family planning promotion activities in Mangochi District. SC/US provided financial and technical assistance to MAM, and MAM implemented the program activities, including

- training sheiks, mualims, imams and leaders of women's and youth groups in HIV/AIDS prevention and family planning promotion,
- adding HIV/AIDS prevention and family planning to the regular madrassa curriculum,
- facilitating discussion of HIV/AIDS and family planning in secondary school Islamic clubs and during Moslem gatherings, such as Dawahs and Ziyalas, and
- incorporating HIV/AIDS and family planning during the Friday Prayer Khutuba and in marriage ceremonies

Various MAM staff provided monthly supervision and program monitoring in the schools and communities. As part of the subgrant, MAM and SC/US conducted an evaluation to measure how effective activities in changing the knowledge, attitudes and practices of the targeted population.

Methods

In order to assess the impact of this program, data on KAP concerning family planning, STDs/HIV/AIDS, and attendance at religious gatherings where these were discussed, were collected through interviews. Data collection consisted of two subgroups: interviews of community members selected through a two-stage cluster sampling design and randomly selected students from local secondary schools.

Clusters for the community survey were selected from lists of villages within the six geographical areas of Mangochi District targeted by the program. Households within the villages were selected at random for interviews. As a control, data were collected from six areas of a neighboring district, Machunga. These areas were roughly matched to the six areas in Mangochi District on the basis of population size, geographical characteristics and relative isolation from population centers. In this fashion, 449 community members were interviewed from Mangochi District and 508 from Machunga District.

For the student survey, four schools were selected at random from lists of schools within the six targeted areas of Mangochi District and the six matched areas of the control district. If the schools were run by Muslim organizations, then 50 students, 25 of each sex, were randomly selected from among the entire student body. In schools run by other religious or public organizations, students were interviewed from the school's Muslim club. Where there were more than 50 students to be interviewed, random selection was used to select only the 50 needed for the survey. Due to budgetary constraints, one of the schools in Mangochi District had to be left out. Additionally, most of the schools have less than 50 students in Muslim clubs. As a result, only 140 students were interviewed and included in the analysis for Mangochi and only 163 students were used in Machinga.

Table 1 Demographic characteristics of students by district

	Mangochi District	Machinga District	Total
male	51 (36.4)	82 (50.3)	133 (43.9)
female	89 (63.6)	81 (49.7)	170 (56.1)
total	140 (100)	163 (100)	303 (100)
never married	138 (100)	162 (99.4)	300 (99.7)
married	0	1 (6)	1 (3)
age (mean)	17.2	17.8	17.5

Table 2 Demographic characteristics of community members by district

	Mangochi District	Machinga District	Total
male	166 (37)	225 (44.3)	391 (40.9)
female	283 (63)	283 (55.7)	566 (59.1)
total	449 (100)	508 (100)	957 (100)
never married	41 (9.1)	88 (17.3)	129 (13.5)
married	353 (78.6)	379 (74.6)	732 (76.5)
divorced	32 (7.1)	18 (3.5)	50 (5.2)
separated	5 (1.1)	12 (2.4)	17 (1.8)
widowed	18 (4.0)	11 (2.2)	29 (3.0)
total	449 (100)	508 (100)	957 (100)
age (mean)	31	30	30.4

Analysis

Frequencies and Chi-squares were calculated for non-continuous data and ANOVA calculations were run for continuous data comparing KAP variables comparing the two districts. Results are included for women of reproductive age (15-49) for selected indicators for comparison to national datasets such as the 1992 DHS and 1996 MKAPHS. Data entry and analyses were done using Epi-Info version 6.02.

Results

Reach of program

When interviewees were asked the question, "Have you ever attended a religious meeting where family planning was discussed?", 38.2% of Mangochi community members compared with 26.1% of Machinga community members responded had attended such a meeting ($p < 0.1$). For the same question, 40.3% of Mangochi students compared with 38.4% of Machinga students responded affirmatively.

Respondents who said yes to this question were then asked to name the organization that conducted the training. Those who responded with "Muslim", "Moslem", "Islam" or "MAM" were grouped into one category for analysis. Twice as many Mangochi community members as Machinga community members (12% vs 6.1%) reported that a Muslim organization had conducted the training ($p=0.05$). More students in Mangochi attended a training by a Muslim organization as well (19.5% vs 16.5% not significant).

Family Planning

Mangochi's high rate of message delivery by religious organizations appears to have had an impact in mean desired family size. Mangochi community members desired 4.2 children compared with 4.5 children in Machinga (ANOVA $p=0.05$). Among students, desired family sizes were smaller, 3.2 in Mangochi and 3.5 in Machinga (ANOVA $p=0.09$). Among all women of reproductive age (15-49) in Mangochi, the mean desired family size was 3.6 versus 4.0 (ANOVA $p=0.009$) and among married women of reproductive age in Mangochi, the mean desired family size was 4.3 versus 4.9 in Machinga (ANOVA not significant).

However, in other important measures of family planning KAP, Mangochi District reported lower scores than Machinga District for community members and students. These included approval of family planning, ever and current use of family planning, and belief that child spacing is important. Among community members, these differences were statistically significant for the first and last of these indicators. Among students, the differences were statistically significant for ever use of family planning only.

When family planning was analyzed among women of reproductive age (15-49 years), however, significant differences between the districts were noted in current use and ever use of family planning. In Mangochi District, 35.6% of these women reported currently using contraception compared with 24.3% of women in Machinga ($p=0.019$). Among married women of reproductive age, 38.7% of Mangochi respondents reported currently using family planning compared with 27.8% in Machinga (not significant). 38.6% of all women age 15-49 and 49.6% of married women in Mangochi had ever used a method contrasted with 29.4% and 33.5% in Machinga ($p=0.006$ and $p=0.001$).

STDs and HIV/AIDS

Knowledge of STDs was tested by aggregating the number of diseases named by each respondent, computing a mean and comparing between the two districts. Community members in Mangochi reported 2.2 diseases versus 2.6 ($p=0.05$) and students reported 2.5 in Mangochi versus 2.7 in Machinga (not significant).

Effective knowledge of preventive practices regarding HIV/AIDS was compared by calculating the percentage of respondents age 15-49 in each district who named either condom usage or staying in a mutually monogamous relationship as effective ways of preventing HIV/AIDS. 45.8% of community members in Mangochi vs 44.5% in Machinga and 49.6% of students in Mangochi compared with 52.5% in Machinga in this age group named either of these two methods of preventing HIV/AIDS (not significant).

When asked if AIDS could be prevented, community members in Mangochi reported 90.1% versus Machinga's 99% ($p=0.05$) and students reported 98.7% in Mangochi compared to 99.4% in Machinga (not significant).

Women of reproductive age (15-49) who had heard of AIDS were asked how HIV/AIDS could be prevented. Among all women, Mangochi respondents reported higher percentages that were significant for two categories: limiting the number of partners (16.7% vs 8.8% $p=0.009$) and staying in a mutually monogamous relationship (8.4% vs 3.4% $p=0.025$). Mangochi and Machinga respondents reported identical knowledge levels for always using condoms (25.6%). Machinga respondents reported higher percentages, although not significant statistically, for not having sex at all, using sterile needles or syringes and not frequenting prostitutes. Among married women, Mangochi respondents reported higher percentages that were significant in the same categories (18.9% vs 6.2% $p=0.001$ for limiting partners and 14.2% vs 4.3% $p=0.003$ for staying in a mutually monogamous relationship). Mangochi married women also reported slightly higher percentages for always using condoms, 23.6% vs 23.0%, although this difference was not statistically significant. Machinga married respondents reported a higher percentage for not having sex at all (64.1% vs 50.9% $p=0.03$) and higher percentages for sterile needles and not frequenting prostitutes (not significant).

Knowledge of HIV/AIDS transmission was calculated by comparing the percentage of respondents who correctly stated that HIV/AIDS is spread through sex, from mother to child during delivery and from use of unclean needles, blades or other skin punctures 68.4% of community members in Mangochi and 66.5% in Machinga responded correctly (not significant) and 70.5% of students in Mangochi and 67.7% in Machinga responded correctly (not significant)

To assess levels of risky behavior, respondents were asked what they considered their risk to be of contracting HIV/AIDS. Of those who responded that they had any level of risk, separate questions were asked pertaining to specific behaviors including not using condoms consistently during sex and having multiple sexual partners. 21.8% of community members in Mangochi versus 14.2% Machinga ($p=0.05$) reported inconsistent condom usage. Students in Mangochi also reported a higher percentage of inconsistent condom usage than Machinga students, 30.3% versus 24% (not significant). For sex with multiple partners, 22.8% of community members in Mangochi and 14.5% in Machinga ($p=0.05$) attributed their risk to this variable. Among students, a higher percentage in Machinga, 15% versus 12.4% in Mangochi, attributed their HIV/AIDS risk to multiple partners. This difference was not statistically significant, however.

A great majority in both districts reported changing their behavior in response to HIV/AIDS. Among community members, 16.6% in Mangochi (not significant) said they started using condoms compared to 16.4% in Machinga and 39.5% of community members in Mangochi and 38.3% in Machinga (not significant) reported restricting sex to one partner. 28.3% of students in Mangochi versus 33.1% in Machinga reported starting condom use and 11.7% in Mangochi versus 9.2% in Machinga reported restricting sex to one partner. Both of these differences were not significant.

Respondents were asked the questions "Have you ever been told to use a condom?" and "Have you ever used a condom?" For the first question, 91.3% of Mangochi community members responded yes compared with 98.5% of Machinga community members ($p=0.05$). Machinga students also reported higher rates of condom use encouragement 99.4% versus 95.9% ($p=0.05$). For ever use of condoms, however, Mangochi scored much higher than Machinga, 27.7% compared to 11.9% ($p=0.05$) for community members and 40.1% compared to 25% for students ($p=0.05$).

Conclusions

In several areas, including attendance at a religious meeting where family planning was discussed, attendance at a Muslim meeting where family planning was discussed, mean desired family size, ever use of condoms, and knowledge of HIV/AIDS transmission routes, Mangochi respondents reported higher levels of correct knowledge than the control area of Machinga. These differences suggest that the intervention had an impact on these indicators. The exact extent of the impact is difficult to gauge without reliable baseline data. However, given the large differences in the CPR and use of modern methods in Mangochi and the 1996 DHS, it is reasonable to assume that the program impact was significant, at least among women of reproductive age.

In interviews with MAM officials, it was reported that Banja La Mitsogolo (BLM) workers had noticed a marked increase in Muslim women clients coming in for family planning services since the beginning of the program. In addition, many religious and women's groups leaders felt that the program had eliminated many of the barriers to open discussion of family planning among Muslim women and that such discussion was flourishing in their communities. Although these findings have not been confirmed in focus group discussions as yet, it appears that these impressions are supported by the data.

Limitations

Due to the lack of baseline data and program activities carried out concurrently by MAM and JSI/STAFH in the control district, concrete conclusions are difficult to draw about the relative impact of the program. As illustrated by the various responses to questions about religious organizations conducting trainings in reproductive health, both districts saw much activity in this regard. Despite a lack of planned program activity by MAM of Mangochi in Machinga District, 14.6% of respondents in Machinga who reported attending any religious meeting where family planning was discussed named MAM as the organization conducting the meeting. MAM/JSI/STAFH activities may have raised KAP levels independently in Machinga and thereby decreased the comparative impact of the MAM/STAFH project in Mangochi.

APPENDIX # 9

Effect of Youth HIV Prevention Program on HIV-Related Knowledge, Attitudes and Practices

Final report of KAP study of school-going youth in Mangochi District

**Save the Children Federation (US)
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Prepared by Aaron Miller

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I INTRODUCTION

This is a report on the results of the baseline and final surveys for one of the operations research (OR) studies carried out by Save the Children Federation - US (SC/US) under the STAFH grant. This study was designed to evaluate the effect of improved AIDS education on the knowledge, attitudes, and practices (KAP) of district primary school youth with respect to AIDS prevention. The baseline KAP survey was carried out in Mangochi District in June of 1996 and the final survey in January 1998.

II. BACKGROUND

Several in-depth studies that examine the KAP of youth in the area of sex and AIDS have been done in Malawi.¹ Most have used focus group research techniques. A summary of the results of these studies generally supports the following conclusions:

- Knowledge of HIV among youth is quite high but some misperceptions are still fairly common.
- First intercourse most often occurs in the teen years, with just over half of 10-20 year olds reporting sexual experience. Exact estimates of age of first intercourse vary, but include a number age 10 and younger.
- Sexual experience appears to begin even earlier in some children with sexual play or imitation and with encounters that may make distinguishing between intercourse and other sexual acts more difficult.
- Youth report a number of pressures to have sexual intercourse early, including
 - Pressure from same sex peers, many of whom report that a person resisting sex may be abnormal (already have an STD or HIV, impotent, etc.)
 - Pressure from boyfriends, many of whom believe that refusal to have sex is just a ploy on the part of girls,
 - Economic pressure and acceptance by many families of sexual activity by girls as a way to supplement income (to the point of encouraging girls to take up relationships),
 - An attitude among some boys and men that forced sex is acceptable,
 - Some cultural practices that either explicitly or implicitly encourage early sex (this appears associated with initiation and advice from some elders),
 - Cultural beliefs that encourage early sex, and
 - Ideas on breast growth, no risk of pregnancy from bush sex, thought that sex is natural and, therefore, unavoidable.
- Where controls on sexual intercourse exist, they take the form of
 - Students' own norms that sex should begin later,
 - A majority of students support the idea of waiting until marriage though a minority appear to follow this, and
 - Fear of STDs and HIV, though actual risks are hard for youth to estimate - they tend to either underestimate their risks in particular situations or overestimate their risk to the point of making behavior change irrelevant.

¹McAlliffe - AIDS: the barriers to behavior change. Zomba University of Malawi Center for Social Research
Chama - Knowledge, attitudes, beliefs and behaviors regarding the sexual activities of girls in TA Kalolo, Lilongwe District, Malawi

Chilowa - Women and AIDS: traditional initiation ceremonies and education of adolescent girls about STD/HIV. Zomba University of Malawi Center for Social Research

Chiwoza - AIDS related beliefs, attitudes and intentions among secondary school students in Malawi

McAulliffe - Youth and AIDS: Baseline survey - Lilongwe and Blantyre districts. Zomba University of Malawi Center for Social Research

Surveys of sexual behavior involving adolescents and as parts of surveys of adults (starting at age 15) have been done or are planned.

- UNICEF-sponsored surveys of urban and rural youth (age 10-20) divided into in-primary, in-secondary and out-of-school groups (Results not yet available)
- Malawi KAP Health survey planned for mid-1996 is including sexual behavior questions and starts at age 15 (The original DHS had HIV knowledge questions but not sexual behavior)
- PSI contraceptive KAP survey starts at age 15 and includes sexual behavior, HIV knowledge and details on condom use

III. RESEARCH QUESTION

Does a program of HIV prevention activities for youth, including mass education combined with group and individual counseling activities for in and out-of-school youth, result in significant changes in KAP regarding HIV and risk behaviors?

IV. OPERATIONS RESEARCH DESIGN OUTLINE

The basic design of this operations research study is an intervention control comparison at baseline to show they are similar and an intervention control comparison at follow-up to show that the intervention group has changed significantly while the control has not. This is the simplest outcome.

INTERVENTION ACTIVITIES

Improve teaching of School AIDS Curriculum

- content
- method
- frequency

EDZI Toto club and activities

- special activities for club members
- mass activities for other students (assemblies, etc)
- group activities
- peer counseling

Out of school youth recruited to participate in school-based clubs

(this was not done because the primary teachers felt the out-of-school youth might have bad influence over the in-school children)

INFORMATION/INDICATORS

Outcome

- age at start of sexual relations
- number of partners (lifetime, last year)
- use of condoms
- stated change in behavior due to knowledge of AIDS

Effect

- current or changed knowledge and attitudes regarding HIV and sexual matters
- knowledge of HIV existence, transmission, etc
- belief in risk of and preventability of HIV
- attitudes towards sexual relationships

V DATA COLLECTION METHODS AND INSTRUMENTS

METHODS

- Structured questionnaire of a random sample of students age 12-19 in selected intervention and delayed-intervention (i.e., control schools) primary schools

INSTRUMENTS

- See APPENDIX A Youth KAP Questionnaire

SAMPLING FRAMEWORK

The sampling framework consisted of 3 stages

- 1 Selection of full primary schools (i.e., primary schools with all eight standards [standard 1-8])
- 2 Determination of sample size at each school
- 3 Randomization of interview candidates for KAP survey

School Selection

40 full primary schools have been selected to be part of the STAFH Project AIDS education effort in Mangochi District. These 40 schools were selected to be included in the project using the following criteria:

- be within a health center catchment area,
- be a full primary school,
- have at least 400 students enrolled, and
- represent each of the 6 Traditional Authorities of the District

10 of these schools were chosen for the STAFH School Survey. 5 schools represent those which have already begun the STAFH intervention, and 5 which will have the intervention in the future (delayed controls). The 5 study and 5 delayed-control schools were selected according to criteria that would achieve some balance in representation of the above 40 schools. These criteria were used:

- remoteness,
- size, and
- location

Since the peri-urban schools around Mangochi Boma and Monkey Bay had already been selected for intervention by the program team for convenience purposes, there were no schools to match for this feature in the delayed-control group. To avoid imbalance between intervention and delayed-control groups, it was decided to drop out these peri-urban schools and include only those that were moderately remote (rural but along main transport routes) and remote (rural and away from or at the end of main transport routes). An attempt was made to geographically distribute surveyed schools in each group as widely as possible among the following areas: on the Namwera Plateau, on the western lakeshore of Lake Malawi, on the eastern lakeshore of Lake Malawi, and inland west of the Lake. The schools selected are identified by the criteria in Table 1.

Table 1 School selection criteria for Youth KAP Survey

Remoteness	Size	Study School	Location	Delayed-Control School	Location
Moderate	Large	Mbwadzulu Chungwena	W Lake Nam Plat	Nkope	W Inland
Moderate	Small	—	—	Nasite	E Lake
Remote	Large	Lugola	E Lake	Thema Mdrinde	W Inland Nam Plateau
Remote	Small	Chikomwe Chowe	W Lake Nam Plat	Chimbende	Nam Plateau

Sample Size

The survey sought to interview 500 boys and 500 girls attending elementary school who were age 12 and over. Half the sample was to come from the intervention cohort and half from the delayed-control cohort. The number surveyed was felt to be sufficient to detect overall changes in KAP over the life of the project without overtaxing program resources.

The survey did attempt to distinguish boys from girls and older from younger youths in analysis. Because of the sample size, only larger changes will be observable between these sub-groups. However, as some patterns in the data emerge, it is likely that changes

within subgroups can be inferred without demonstration of statistical significance for each and every one

An attempt was made to obtain current lists of all enrolled students in this age group from each of the schools. These lists were to have been randomized to select interviewees and alternates. These records were not uniformly available, however, so the following method was used.

Schools were assigned a number of interviews proportional to their enrollment. Enrollment was determined by records obtained from the District Education Office, which were current as of January 1996. This enrollment figure was subsequently verified with the headmaster of each school. After adding up the total number of students in the 10 schools, the average enrollment per school was calculated. The reported enrollment for each school was divided by this average to obtain a decimal fraction. This decimal fraction, when multiplied by 100, gave the number of students to be interviewed at the school. If the number was an odd integer, it was raised to the next (even) number. This even number was then divided into two equal halves to obtain the number of boys and the number of girls to be called.

Upon doing these, it was found that the pool of interviewees in intervention schools was to be 522 but that of the delayed control schools only 477. It was decided, therefore, to add a 5% factor to the delayed-control schools to bring their total number up over 500 (504). The summary of these calculations is presented in Table 3.

Table 2 Calculations for sample size in each Youth KAP Survey school

Column A	Column B	Column C	Column D	Column E
NAME OF SCHOOL <i>(delayed control schools italicized)</i>	TOTAL ENROLLMENT <i>(DEO as of 1/96)</i>	Total enrolled at this school Avg. school enrollment (1206)	Column C * 100 <i>(rounded up to nearest even #)</i>	Column C * 100 +5% <i>(rounded up to nearest even #)</i>
<i>Nasite</i>	650	53		56
<i>Chimbende</i>	1,171	97		102
<i>Nkope</i>	1,279	1 06		112
<i>Mbwadzulu</i>	1,853	1 53	154	
<i>Thema</i>	1,209	1 00		106
<i>Chikomwe</i>	624	51	52	
<i>Lugola</i>	1,281	1 06	106	
<i>Chungwenya</i>	1,491	1 23	124	
<i>Mdinde</i>	1,462	1 21		128
<i>Chowe</i>	1,039	86	86	
TOTALS	12,059	9 96	522	504
SAMPLE Take the number appearing in Column D or Column E and divide by 2 to determine the number of girls and number of boys age 12 years and over to be sampled at each school			Sample from Study Schools	Sample from Delayed Schools

Randomization Of Interviewees

- 1 In advance of arrival, number sheets with numbers from 1-500 were prepared.
- 2 On the day of the survey, enumerators showed up at the school and (with the assistance of the teachers) asked all the children between the ages of 12 and 19 to assemble in a common area.
- 3 Boys and girls were separated into same sex groups and a head count was made of each.

- 4 Once the head count was completed, no child was allowed to enter or exit the line without approval of the survey team. This was to ensure the number counted did not change.
 - 5 Numbers were cut into separate slips to match the number of boys counted and these slips were placed in an envelope.
 - 6 Numbers were cut into separate slips to match the number of girls counted and these slips were placed into another envelope.
 - 7 The boys and girls each drew a number from their respective envelopes.
 - 8 Names, ages, and standard (class) of those holding numbers up to the cut-off determined in the above table (= Column D or E / 2) were entered in separate boys and girls registers.
 - 9 Five to ten alternates were added to each list to be interviewed if a selected child did not present for interview (i.e. absconds). These were simply the succeeding numbers over and above those needed for interview in step 8.
 - 10 The boys and girls returned to their respective classroom.
 - 11 A list of interviewees from each classroom was prepared and presented to each teacher.
 - 12 The names of the interviewees were called class by class as the interviews progressed.
- Similar selection process was used for the final KAP survey.

VI. SURVEY INSTRUMENT

The KAP survey instrument was developed by SC/US with the assistance of an outside consultant. The instrument was piloted and modified over two rounds of field testing with local youth. Additional enumerators were then hired and the entire team was trained over two days in survey administration and data handling.

The finalized survey instrument had 56 direct interview questions (see Appendix A) which took 20-30 minutes to administer. A team of 10 enumerators (7 female and 3 male) and 2 or 3 survey supervisors traveled to each school on a pre-arranged day. After completing the sample selection, the enumerators interviewed children on a first come, first served basis irrespective of sex. On only a few occasions was it necessary to shift an interviewee to a same sex interviewer because of excessive shyness. In order to keep children from absconding in large numbers, a small packet of biscuits was given to each child at the completion of the interview. In addition, those children who were kept beyond lunch hour were fed a soft drink and bread roll.

As surveys were completed, the survey supervisors reviewed each form to ensure that information was complete. Questions, when they arose, were referred immediately back to the enumerator for clarification. This allowed the enumerator to recall the student, if necessary, to complete missing data.

VII. DATA ANALYSIS

Data was edited and coded by the SC/US trainers and the data officer. It was then entered into the computer and analysed using Epi-Info 6.

VIII. RESULTS OF THE KAP SURVEY

A total of 1,035 youth aged 12 to 22 (510 boys and 525 girls) were interviewed in the baseline survey as against 928 (470 boys and 458 girls) in the final survey. It should be noted that this 50% gender distribution does not reflect the considerably higher proportion of boys attending school, but was a part of the purposive sample frame. For this reason, age distribution of girls was generally younger than that of boys. Age distribution of respondents is listed in Table 3.

CHARACTERISTICS OF RESPONDENTS

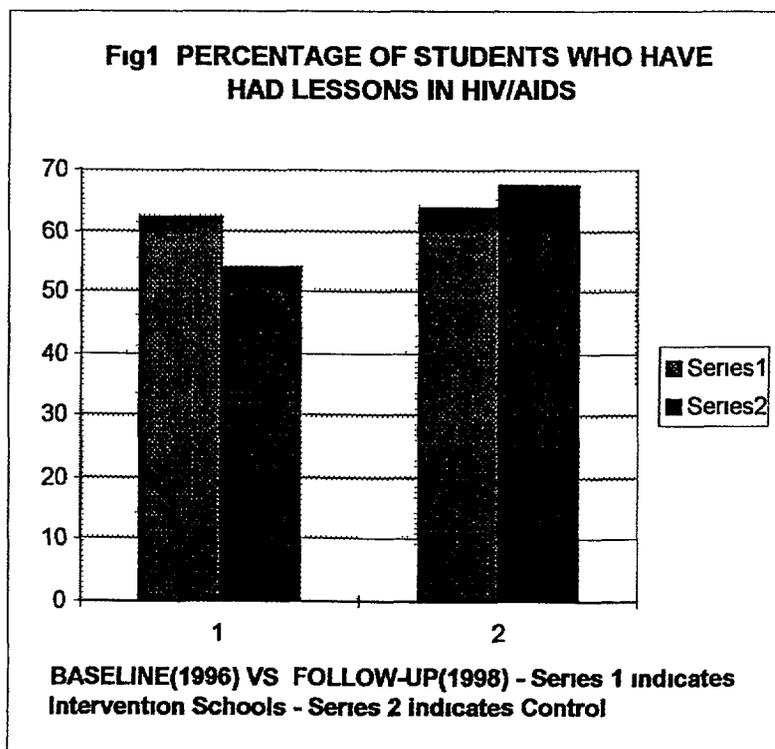
Table 3 Age and gender distribution of youth surveyed

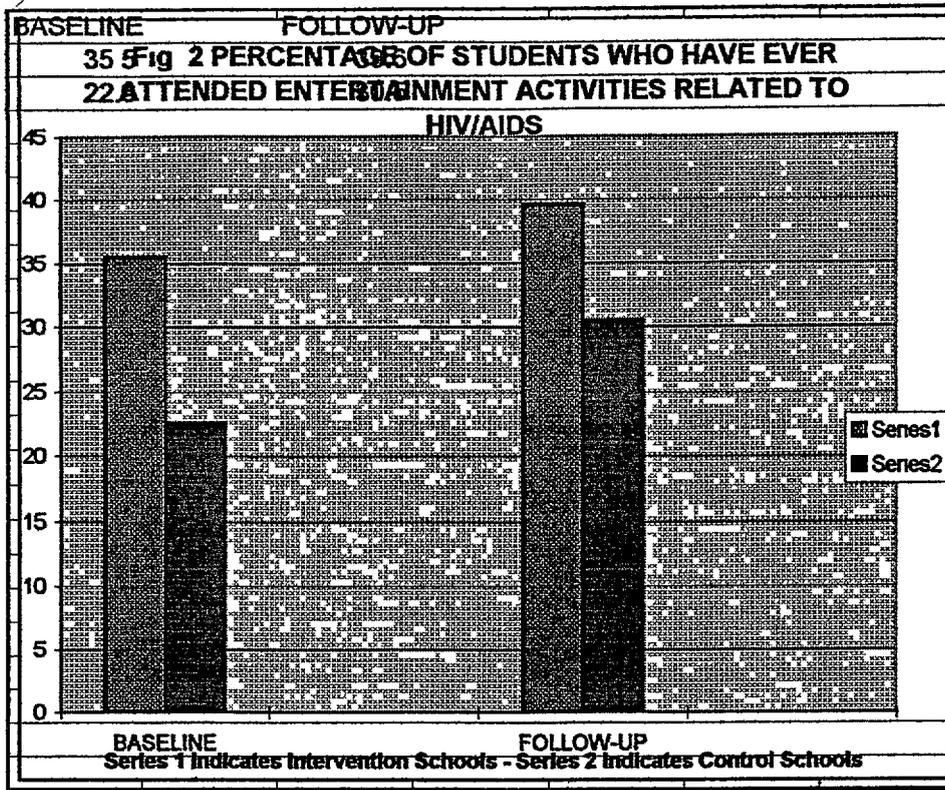
	KAP1 (N=1035)		KAP2 (N=928)	
	Intervention (N=530)	Control (N=505)	Intervention (N=439)	Control (N=489)
Average Age	15.1	14.3	14.9	14.9
Average Standard (1-8)	5.0	4.6	5.9	6.1
Male	49.6%	48.9%	53.0%	48.7%
Female	50.4%	51.1%	47.0%	51.3%

SCHOOL-BASED AIDS ACTIVITIES

603 (58.3%) of all respondents indicated they have had classes concerning HIV/AIDS in school during the baseline survey as against 65.6% in the final survey. From the baseline survey, 54.1% of pupils in control schools reported having had HIV lessons. This was less than the 62.3% pupils who reported having had HIV lessons in the intervention schools. In the final survey more pupils in the control schools reported having HIV lessons than the intervention schools, 67.3 versus 63.8% (see Fig 1). In depth interviews were held with key informants, such as the District AIDS Coordinator and the Chief Primary Education Advisor, to find what happened. It turned out that the control schools had received interventions similar to that being implemented by SC/US, from the District AIDS Coordinator (DAC). Actually, the DAC, who is also a trainer in SC/US interventions, used the curriculum prepared by SC/US in training the control schools without the SC/US knowledge. This, of course, made the intervention-control design of SC/US school program invalid and it shows in the rest of the results reported in this document. In general, the results were inconclusive. On majority of the questions, there was greater improvement over time among control students than intervention students. This is not surprising given that at the baseline the control students had lower KAP indices than the intervention students so had more room for improvement for the same level of intervention.

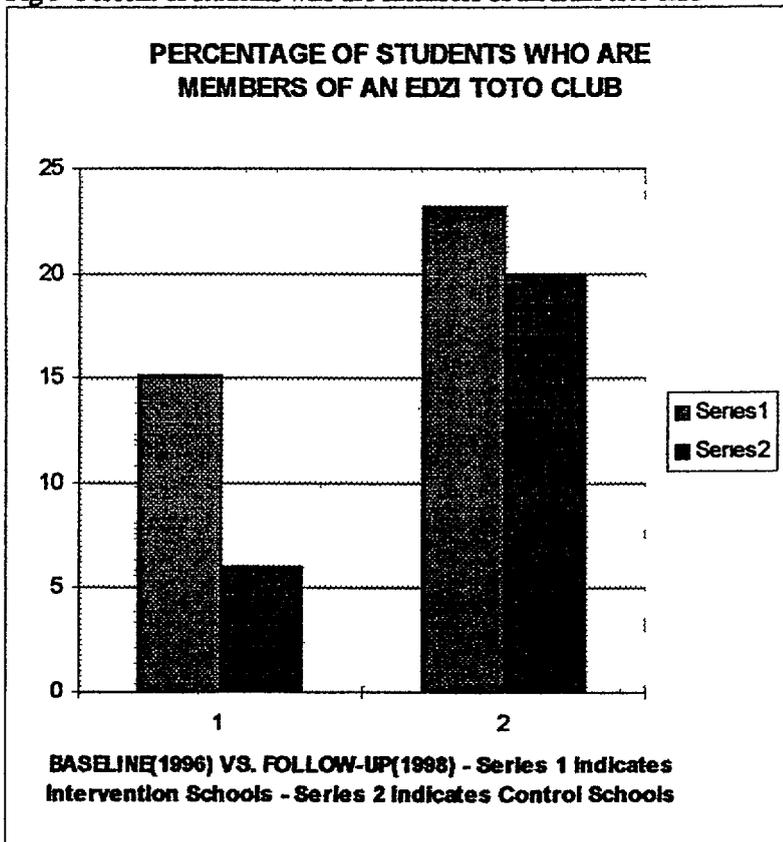
The results are summarised in the Figures below





Summary of Fig 2 An increase of 4.1% occurred in intervention schools, while an increase of 7.9% in control schools for number of students who ever attended entertainment activities related to HIV/AIDS

Fig 3 Percent of students who are members of an Edzi toto club



Summary of fig 3 An 8.1% increase in Edzi Toto Club membership occurred in intervention schools while an increase of 14.0% occurred in control schools

Fig 4 Types of persons with whom students discussed their sexual behavior in the last 12 months

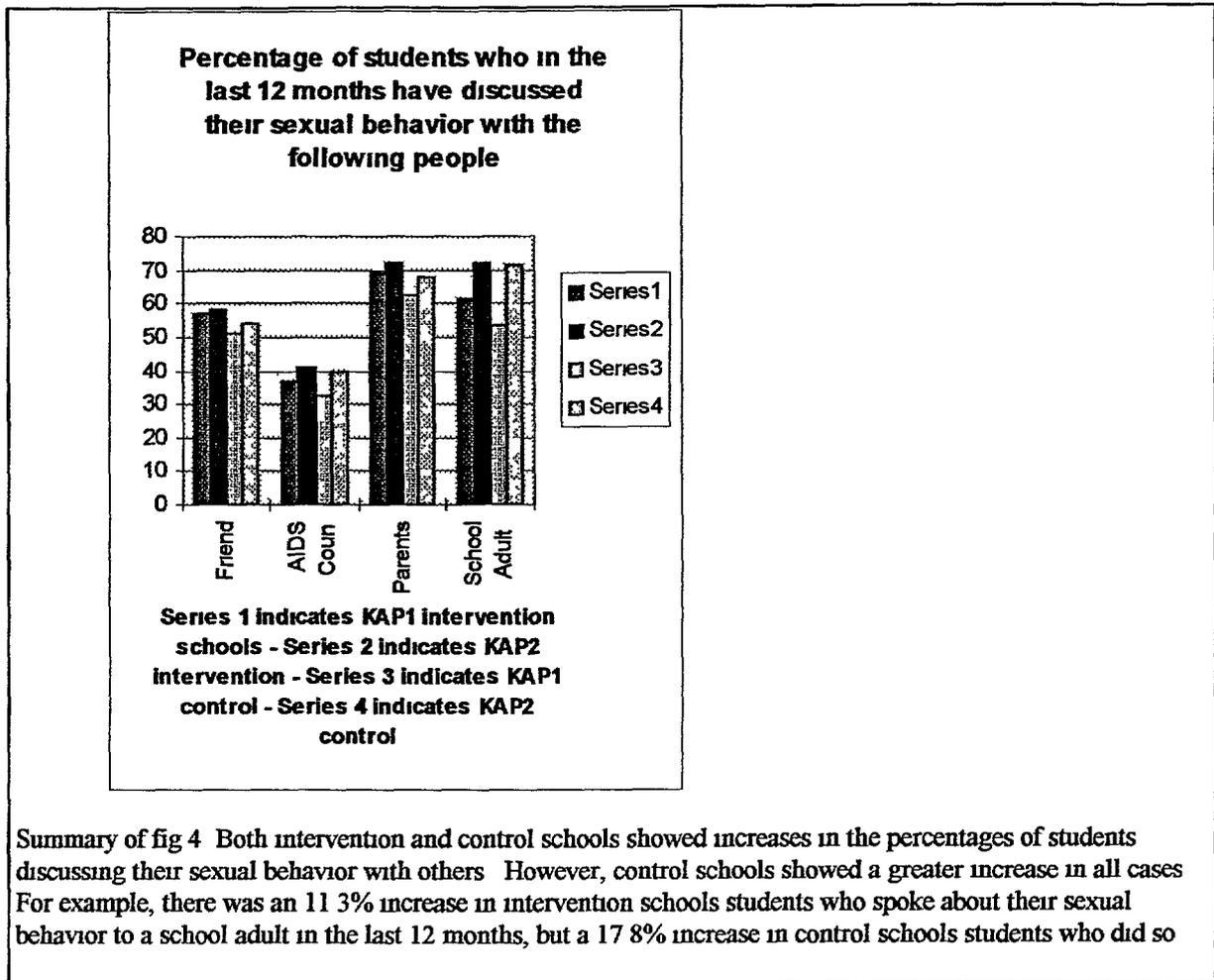
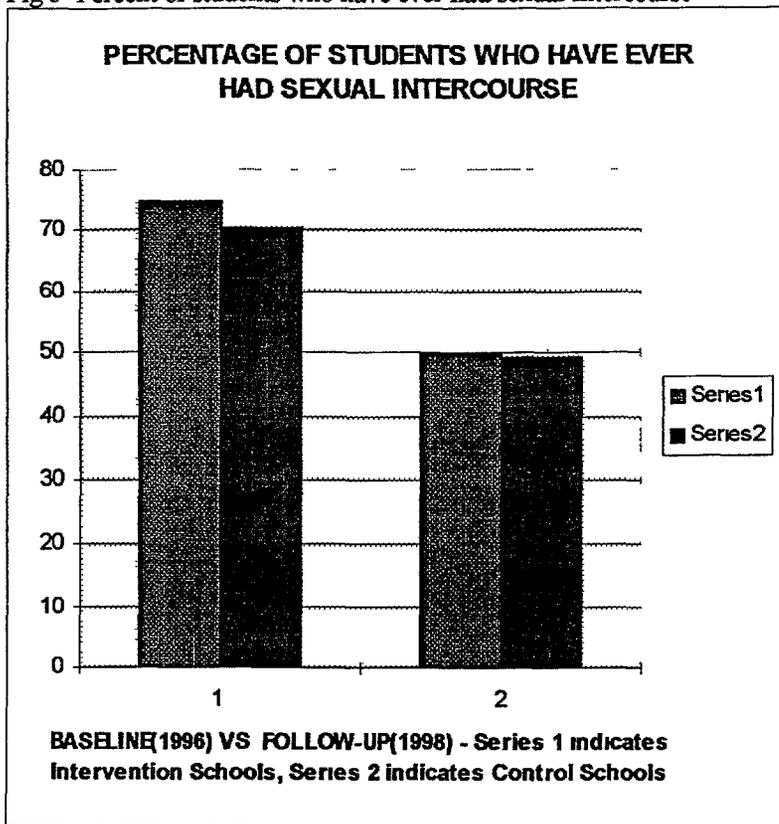
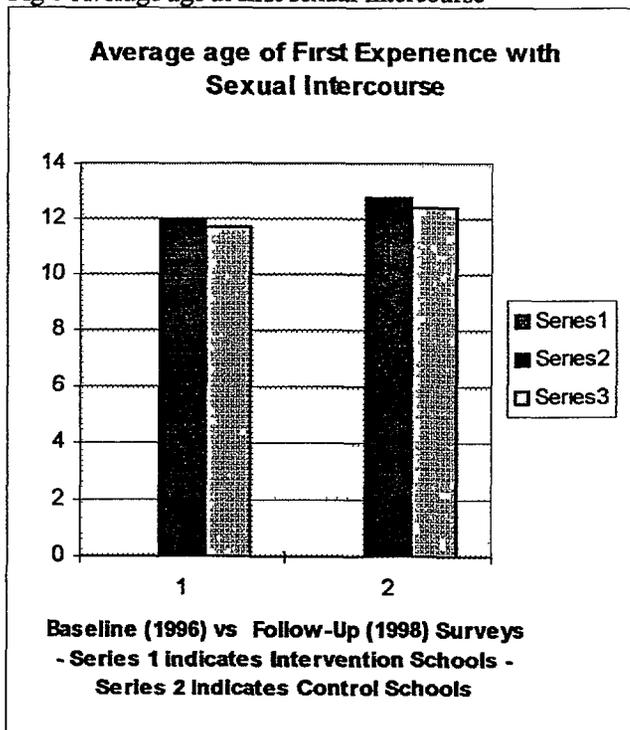


Fig 5 Percent of students who have ever had sexual intercourse



Summary of fig 5 There was a decrease of 24.9% in intervention schools for “percentage of students who have ever had sexual intercourse” while a decrease of 21% occurred in control schools

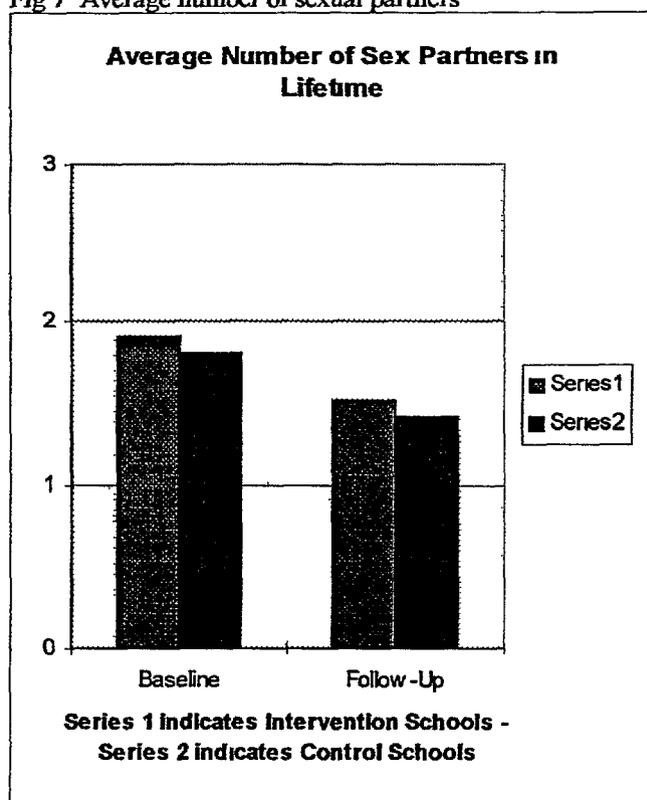
Fig 6 Average age at first sexual intercourse



Summary of Fig 6 There is a slight increase in the age at which pupils initiate sexual activity in both intervention and control schools, with the intervention schools faring slightly better On average, students are waiting 0.8 years longer to have sexual intercourse in intervention schools In control schools, they are waiting 0.7 years longer

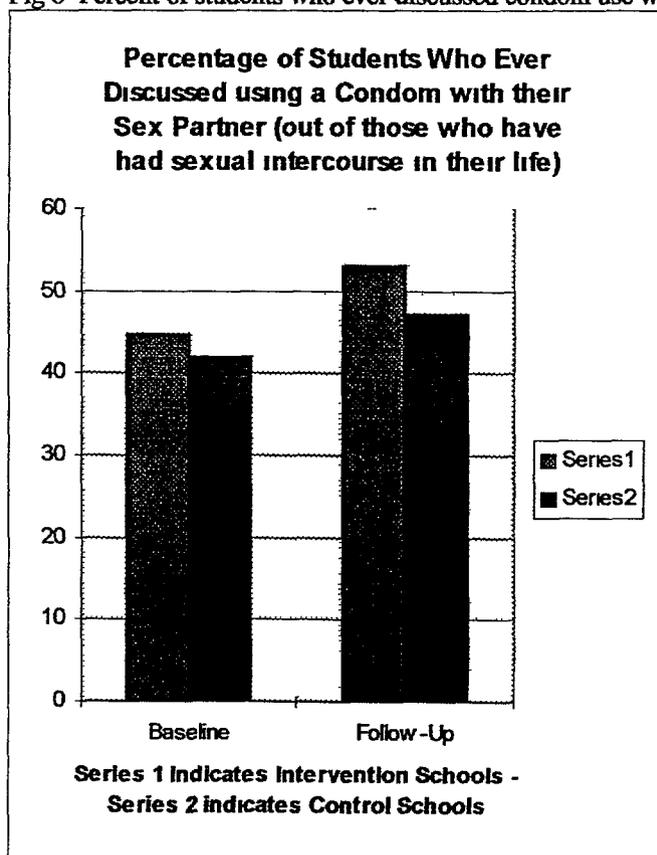
45

Fig 7 Average number of sexual partners



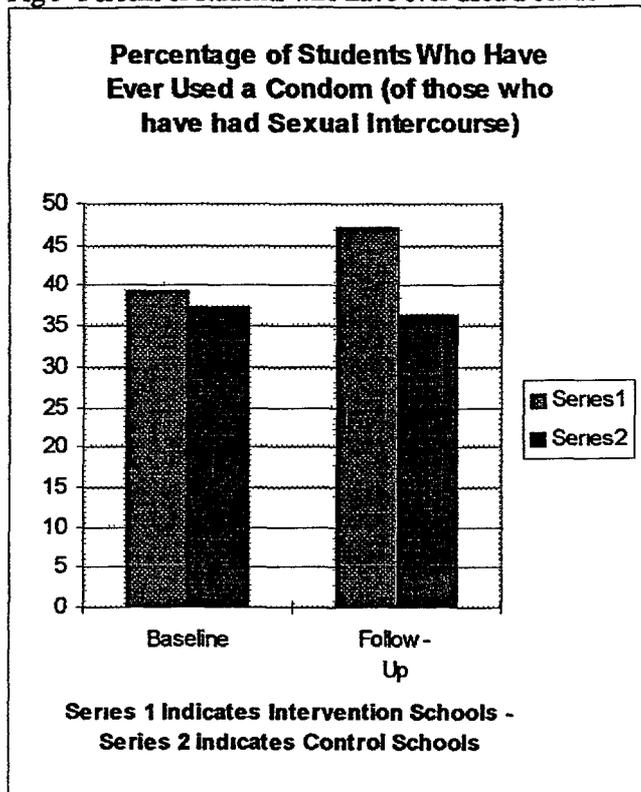
Summary of fig 7 The average number of sex partners per student decreased by 0.4 for both intervention and control schools. From 1.9 to 1.5 partners for intervention schools and from 1.8 to 1.4 partners for control schools.

Fig 8 Percent of students who ever discussed condom use with their sex partners



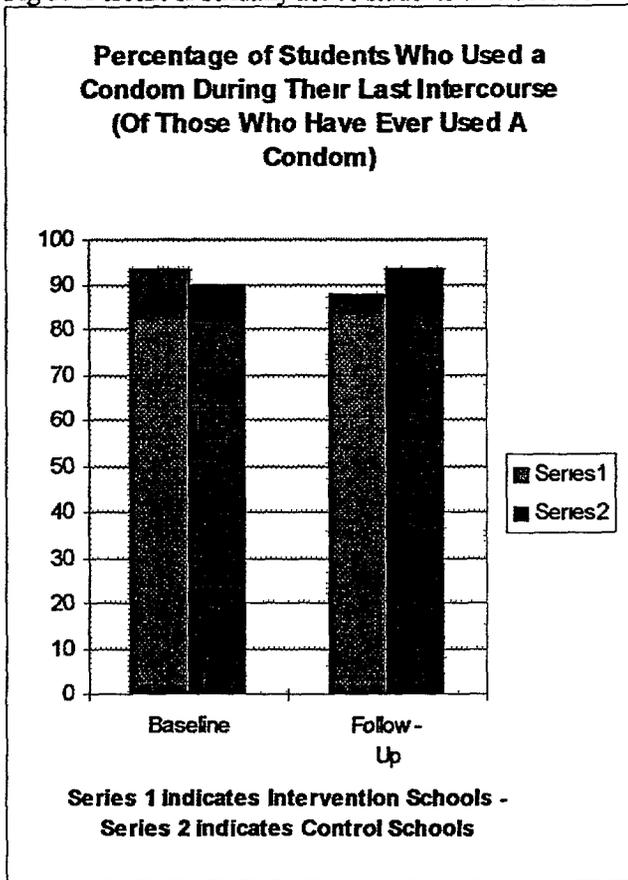
Summary of fig 8 The number of students who have discussed using a condom with their sex partner (of those who have had sexual intercourse) increased by 8.4% in intervention schools. Control schools show only a 5.0% increase in this area.

Fig 9 Percent of students who have ever used a condom



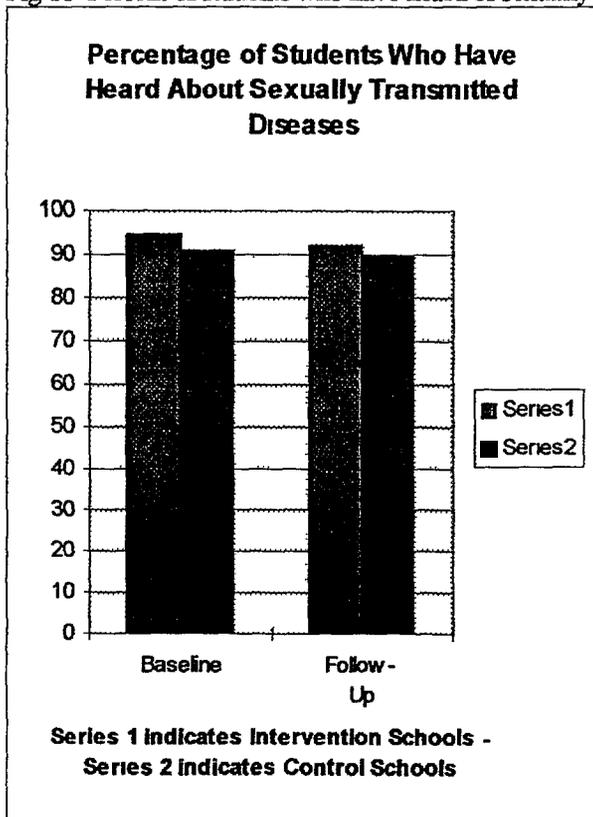
Summary of fig 9 Condom use was found to be higher in intervention schools than in the control schools. There was a 7.9% increase in condom usage in intervention schools among students who reported ever having sexual intercourse, compared to an 0.8% decrease in condom usage in control schools.

Fig 10 Percent of sexually active students who used condoms during their last intercourse



Summary of fig 10 There was a 5.9% decrease in condom use at last sexual intercourse in intervention schools compared to a 3.2% increase in condom usage in control schools

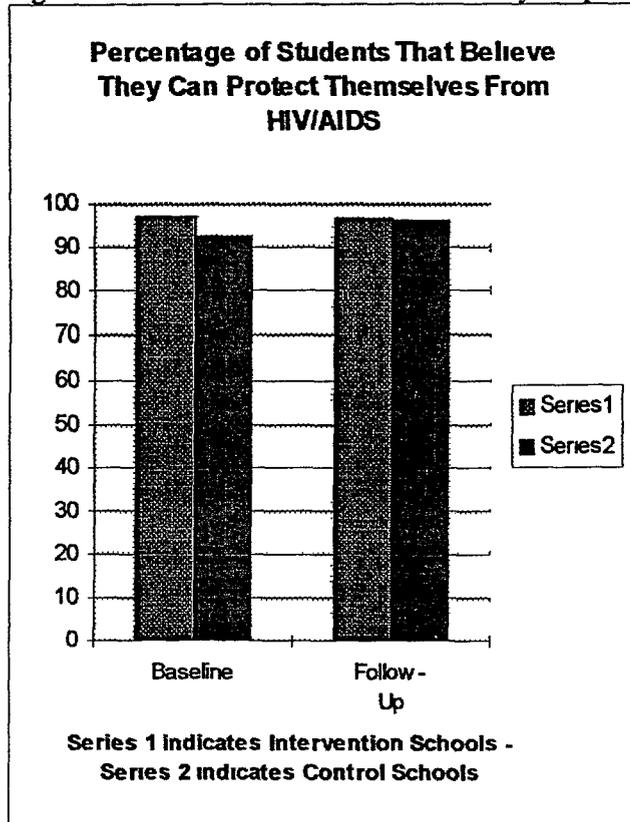
Fig 11 Percent of students who have heard of sexually transmitted diseases



PS

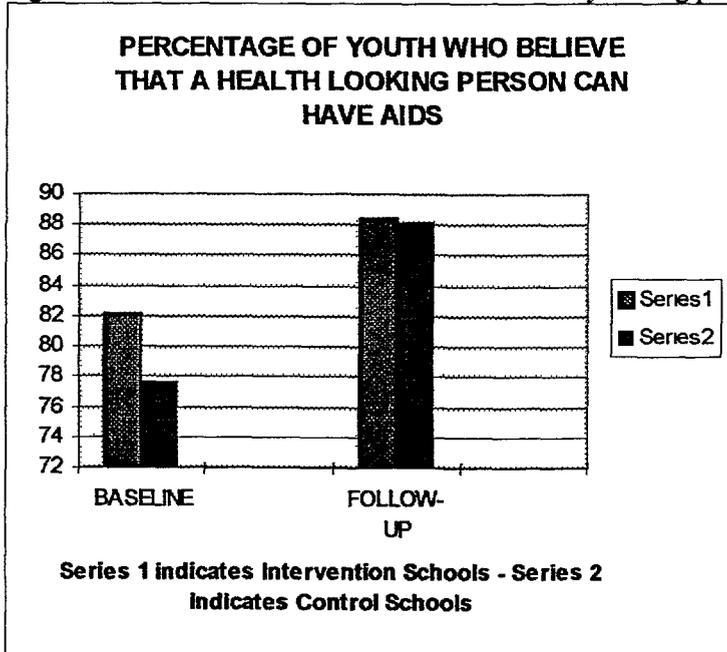
Summary of fig 11 The percentage of students who have heard about STDs decreased by 2.9% in intervention schools and by 1.6% in control schools

Fig 12 Percent of students that believe that they can protect themselves from HIV/AIDS



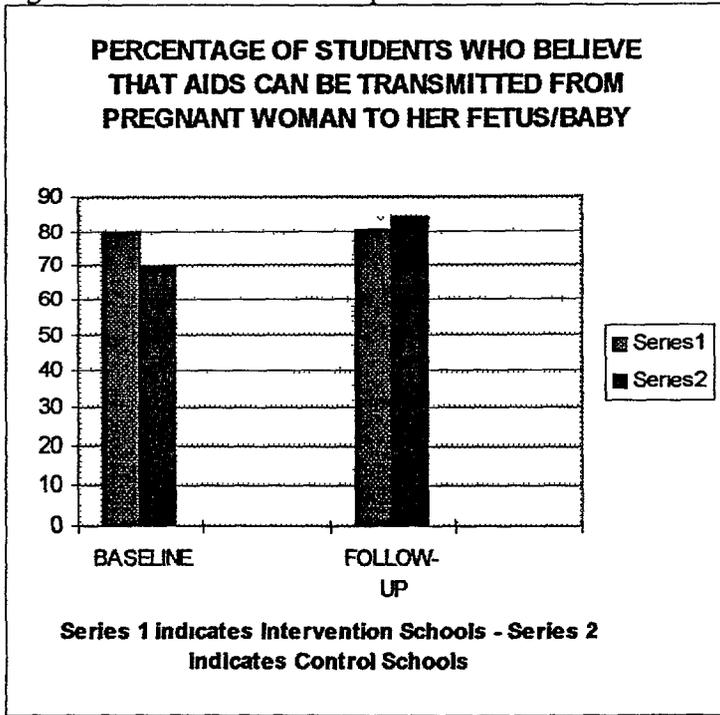
Summary of fig 12 There was a 0.4% decrease in the percent of students who reported that they could protect themselves against HIV/AIDS in intervention schools, while there was an increase of 4.0% in control schools

Fig 13 Percent of students who believed that a healthy looking person can have the AIDS virus



Summary of fig 13 For percentage of students who 'believe a healthy looking person can have AIDS', an increase of 6.3% was observed in intervention schools compared to an increase of 10.5% in control schools

Fig 14 Percent of students who reported that AIDS can transmitted from mother to child



Summary of fig 14. The percentage of students who believe that pregnant women can transmit AIDS to their fetus/baby increased by 0.5% in intervention schools, and by 14.4% in control schools

IX. DISCUSSION

The baseline and final surveys measured students' knowledge, attitudes, and practices concerning HIV/AIDS and how they might protect themselves from the disease. The aim of the study was to compare the measure the impact of HIV/AIDS education in primary schools using a control and intervention design. Unfortunately, the validity of this research was decreased significantly as a result of similar HIV/AIDS education activities carried out in both control and intervention schools during the study period. The results were confused and inconclusive at best, and the data do not support the hypothesis that the SC/US-STAFH educational activities had a significant positive effect. On the majority of survey questions, there was greater improvement over time among control students than among intervention students. On some questions, the intervention schools showed greater improvement in KAP. On still other questions, there was a significant decrease in both intervention and control schools. The validity of this intervention/control study was decreased by the inability to control for other, non-project AIDS education activities that occurred in the control schools during the intervention period. Moreover, the existence of significant differences in KAP between intervention and control schools at baseline suggests that the design was flawed at the outset. Generally, the surveys show improvements in the students' KAP regarding AIDS, but it is difficult to conclude from the surveys that STAFH interventions alone were responsible for achieving these improvements.

APPENDIX # 10

**EFFECT OF ALTERNATIVE SERVICE
DELIVERY ARRANGEMENTS ON RURAL
FAMILY PLANNING SERVICE QUALITY AND
COVERAGE**

Final Report

**Save the Children Federation
Mangochi**

by

**Nathalie Routhier
STAFH Project Intern from the World University Services of Canada**

July 1998

Introduction

In 1992, the Demographic and Health Survey (DHS) reported a large discrepancy between the level of knowledge on Family Planning (FP) and the number of people currently practicing modern FP in the rural regions of Malawi. This survey showed that 91.2% of married women and 93.9% of married men in the rural regions of Malawi knew at least one modern contraceptive method. Moreover, 82.2% of married women and 84.2% of married men knew a service provider for modern contraceptives. However, only 6% of women and 10.5% of men reported using a modern method at the time of the survey.

In response to this survey and to an alarming 3.2% population growth rate, the Government of Malawi adopted a National Population Policy in 1994. The goal of this policy was to reduce population growth to a level compatible with Malawi's social and economic goals.

In 1996, the percentage of married individuals who knew at least one modern contraceptive method slightly increased (98.6% women and 99.7% men) in rural Malawi (1996 KAP survey). The percentage of married women currently using contraception doubled from 6% to 14%, but the gap between knowledge and behavior remained important.

Barriers for widespread use of contraceptives were assessed by asking married individuals their main reason for not using contraception (KAP survey 1996). The majority of respondents reported reasons such as the desire to have more children, pregnancy, postpartum/breastfeeding, menopause/hysterectomy, and infecundity. For women, other reasons included opposition by the husband (2.6%), lack of knowledge (2.6%), not having sex (2.5%), and fear of side effects (2.4%). The fear of disapproval by the husband was also documented in the 1992 DHS in which 92% of married women reported that they approved of FP, but 20% did not have the consent of their husband. For men, other reasons included infrequent sex (3%), not having sex (2.3%), lack of access (2.2%), and fear of side effects (2%). The fear of side effects might in fact be excessive compared to the actual risk since excessive fear of side effects was found among FP providers and their clients (Quality of Care Study, Malawi).

The low level of modern contraceptive use could be caused by a problem with the quality of care in Malawi. Such a problem was reported by FP clients and providers in a Quality of Care Study undertaken in Malawi by JSI-STAFH. Men also reported a lack of access to family planning, but it was unclear whether the barrier was distance, opening hours, availability of supplies, etc. The impact of distance to a FP provider on contraceptive users in Malawi remained unclear.

To increase access to FP services, SC/US received funding from USAID's Support to AIDS and Family Health (STAFH) Project to implement reproductive health (including FP) activities in the Mangochi District from October 1995 to September 1998. The STAFH project aimed to promote widespread use of contraceptives and increase the Contraceptive Prevalence Rate (CPR) from 3.3% to 20% by September 1998. This goal would be achieved by increasing the demand and the access to quality FP services in 14 of the 23 health centers providing FP in the Mangochi district. The project was centered on health centers since they were the main FP providers in the Mangochi district.

As part of the ongoing STAFH project, this operations research (OR) activity was conducted in 5 government public health centers of the Mangochi district from January 1997 to March 1998. The goal of the OR was to compare service delivery strategies in terms of effect and quality. An experimental design was used to compare 3 types of service delivery strategies. In the 3 models, FP promotion was increased at the community level and the quality of care at the health center was improved. In model 1, no FP services were provided at the community level, while in models 2 and 3, FP provision was available in the community. Increased FP provision was done by Health Surveillance Assistants (HSAs) in model 2 and by HSAs and Community Based Distributors (CBDs) in model 3.

The goal of the OR was to optimize the efficiency of FP interventions and provide program administrators with information useful for improving service delivery. FP outcomes were expected to improve significantly in the 5 catchment areas due to the increased FP promotion at the community level and improved quality of care at the health center. No differences in FP outcomes were expected between the 3 experimental conditions since the efforts for FP promotion were the same and only the extent of FP provision at the community level differed. FP provision in the community (models 2 and 3) was not expected to result in increased FP outcomes beyond

the level achieved in model 1 It was hypothesized that people would travel to the health center for FP provision, as they do for other services

Methodology

Subjects

Subjects consisted of people living in 5 different catchment areas centered around health centers (HC) of the Mangochi district. A catchment area was defined as a circular area with a 7.5 km radius centered around a HC. A total of 2,700 persons entered the FP program on a voluntary basis from January 1997 to March 1998 inclusively. Most FP promotion and counseling was done with women, but some men also interacted with HSAs, Family Planning Promoters (FPPs) and CBDs in the villages. Table 1 indicates the number of women who were of childbearing age (15-49 years), and thus potential subjects, in each catchment area in 1996. Populations of catchment areas were calculated using projections from the 1987 census and an estimated annual growth rate of 3.2%. The number of women of childbearing age was estimated as 22% of the population in rural areas of Malawi (National Statistics Office, Zomba).

Table 1: Population and Number of Women of Childbearing per Catchment Area in 1996

CATCHMENT AREAS	POPULATION (1996)	NUMBER OF WOMEN OF CHILDBEARING AGE (1996)
Katuli	23,179	4,941
Makanjira	21,528	4,589
Monkey Bay	13,949	2,974
Namwera	20,406	4,350
Nankumba	5,758	1,227

Family Planning Promotion and Provision

Models of Service Provision

The experimental paradigm increased allocation of FP resources in the 5 catchment areas, in addition to the FP services already provided by trained nurses at the HC. At the health center, trained nurses promoted FP promotion through group talks and individual counseling. They were also responsible for supplies and distribution of oral contraceptives, condoms and DMPA injections. HC staff referred patients to hospitals for surgical contraception.

Catchment areas were randomly assigned to one of the three following experimental conditions with differential physical access to FP methods:

Model 1

- Improvement in the quality of HC based FP services
- FP promotion
 - HC staff at HC
 - HSAs and FPPs inside the catchment area
- FP provision
 - HC staff provides contraceptives at HC
 - HSAs only distribute condoms at the HC
 - FPPs distribute condoms inside the catchment area

Model 2

- Improvement in the quality of HC based FP services
- FP promotion
 - HC staff at HC
 - HSAs and FPPs inside the catchment area
- FP provision
 - HC staff provides contraceptives at HC
 - HSAs provide contraceptives at the HC and inside the catchment area
 - FPPs provide condoms inside the catchment area

Model 3

- Improvement in the quality of HC based FP services
- FP promotion
 - HC staff at HC
 - HSAs inside the catchment area
 - CBDs outside the catchment area
- FP provision
 - HC staff provides contraceptives at HC
 - HSAs provide contraceptives at the health center and inside the catchment area
 - CBDs provide condoms and oral contraceptives outside the catchment area

In models 2 and 3, two catchment areas were chosen per model to improve the reliability of the data. In the 3 models, the quality of the health center services was increased by providing a refresher course for the nurses already trained in FP provision and by providing FP equipment.

Training and Duties of FP promoters and providers

All FP promoters and providers were trained before January 1997, except for FPPs who were trained in July 1997.

HSAs

In all catchment areas except Makanjira, HSAs received 8 weeks basic training including FP. They were then attached to a FP provider at the HC to learn to administer DMPA injections. The FP promotion duties of the HSA involved health talks and individual counseling at the health center and in the community. Other promotional activities included support for FPPs and CBDs and promotion of Chishango condoms in grocery stores. FP provision involved the distribution of oral contraceptives, condoms, spermicides and DMPA injections at the health center and in outreach clinics (within 7.5 km). HSAs ceased giving DMPA injections about 3-6 months into the study in response to a letter from MOHP head office. Like the HC FP providers, HSAs referred patients to the hospital for surgical contraception.

In Makanjira, HSAs received the 8 weeks basic training only. They received no training in how to administer DMPA injections. The FP promotion duties were the same as in the other villages, but the HSA only distributed condoms at the health center.

CBDs

CBDs were volunteers selected by their community. They received 14 days training on FP, STDs, and HIV/AIDS, using the National Family Welfare Council of Malawi curriculum. FP promotional activities included community health talks, individual visits to households and individual peer counseling, outside the 7.5 km radius. Distribution of condoms, spermicides and oral contraceptives was performed outside the 7.5 km catchment areas. CBDs referred clients to HSAs for DMPA injections (prior to their being ordered to stop this particular activity) and to the hospital for surgical contraception.

FPPs

FPPs were volunteers from the community who received a 3-day training course on FP, STDs and HIV/AIDS. Promotion for FP was done through health talks in villages and individual counseling in households within 7.5 km from the health center. Provision of contraceptives was limited to the distribution of condoms within the 7.5 km catchment area.

Table 2 shows the allocation of family planning service providers to each catchment area.

Table 2 Number of Trained FP Service Promoters and Providers per Catchment Area

CATCHMENT AREAS	HSAs	HCAs	CBDs	FPPs
Katuli	1	1	0	16
Makanjira	1	3	0	18
Monkey Bay	1	8	14	0
Namwera	2	4	0	16
Nankumba	2	1	11	0
Total	7	17	26	50

One HSA was trained in family planning promotion in each catchment area. In two catchment areas (Namwera and Nankumba), an additional HSA was trained in August 1997 due to constraints such as larger catchment areas or a temporarily incapacitated HSA. In accordance with different FP service models (see above), CBDs were only providing FP services in Monkey Bay and in Nankumba, and FPPs were recruited only in Katuli, Makanjira and Namwera. Two CBDs were recruited per village, amounting to 14 CBDs in Monkey Bay and 11 in Nankumba (one village was missing a CBD in Nankumba). One CBD dropped out of the project in Monkey Bay and was not replaced.

Data Collection

Monthly reports on the activities of the FP service providers were filled out by HSAs (community forms), CBDs (CBD forms), and HC staff (health center forms) and reports were collected and verified for accuracy by the FP trainers. Quarterly service statistics were calculated based on these reports. Indicators calculated by HSAs were verified for accuracy and corrected when necessary (e.g. number of people practicing modern FP). The information was then entered into the computer by the project's data officer.

Statistics

CPR was calculated by dividing the number of women practicing modern FP by the estimated number of women of childbearing age for a given year. CPR was calculated for the months of June 1996 (baseline) and March 98 (end of intervention). The percentage of New Acceptors was calculated by dividing the number of first-time users by the number of "potential acceptors" (i.e. the number of women of childbearing age minus the number of registered users) for each catchment area. The accuracy of this denominator is questionable since it is based on program based CPR statistics rather than census statistics. Baseline and intervention data for new acceptors were compiled over 3 months periods: July 96 to September 96 and January 1998 to March 1998 (3 last months of intervention). Baselines were collected early because the intervention was initially planned for October 1996, but was delayed because FP providers were insufficiently trained.

The percentage of 6-months dropout was found by dividing the total number of dropouts for a given month by the number of people who entered the program 6 months before (i.e. new acceptors and restarters). Therefore, percentages of 6-months dropouts were calculated only for the months of July 1997 until March 1998 inclusively. The number of 6-months dropouts was collected throughout the intervention, but no baseline was available for comparison. Comparisons in dropout rates were done across models, assuming that the dropout rates were equivalent at baseline. A qualitative analysis of reasons for dropouts was performed. This analysis determined the likelihood that a larger number of dropouts had their intention met (i.e. if the program met their needs for FP) in a given model.

Odds ratios tests were conducted to measure the effect of time (baseline-intervention) and model (1,2 and 3) on the likelihood of new acceptors starting contraceptive use, users registering and users dropping out of the program after 6 months. Confidence intervals (95% and 99%) were constructed for each odds ratio.

SS

RESULTS

HC based FP services

The quality of health center based services was tested by comparing the number of days of FP services per week, the interruption of services, and the regularity of supplies at the health center at baseline and during intervention

From baseline to July 1997, the number of days of FP services per week remained the same for Katuli, Makanjira, and Monkey Bay, but it increased from 2 to 5 for Namwera. No baseline data was available for Nankumba.

Overall, interruptions in FP services remained absent or decreased between 1996 and intervention. Interruptions were compiled for the year 1996 and for the first 6 months of intervention. No interruptions in FP services were recorded at baseline and during intervention in Namwera and Katuli. In Monkey Bay and Nankumba, the regularity of FP services increased from baseline to intervention. Makanjira observed a small increase in the number of interruptions from zero at baseline to a one day interruption during intervention. No data was available beyond the first 6 months of intervention.

The supply of contraceptives in the health centers was improved. In 1996, all centers except the one located in Monkey Bay, reported stock-outs of pills, injections, condoms, or spermicides for periods varying between one week and one year. The only shortage reported during the intervention was a shortage of pills at the Makanjira health center in January 1998.

FP Promotion

FP promotion increased in all catchment areas. In 1996, health center based promotional activities involved only infrequent representations of drama groups in Katuli, Makanjira, and Namwera. In Monkey Bay, they involved drama groups, health talks, and a band as well as the training of Traditional Birth Attendants as FP motivators. No promotional activities took place in Nankumba at baseline. During intervention, FP promoters gave health talks in Makanjira (number of talks = 133), Katuli (71), Namwera (326), Monkey Bay (209) and Nankumba (278), in addition to the health center based talks.

FP Outcomes

Table 3 shows the number of registered users of contraception recorded at baseline (June 96) and at the end of intervention (March 98). There was a statistically significant increase in the number of registered users between baseline and intervention for all catchment areas ($p < 0.01$) (table 5). The increase in the number of registered users was 2.8 fold in Makanjira, 6.0 fold in Katuli, 10.2 fold in Namwera, 74.2 fold in Monkey Bay and 133.1 fold in Nankumba.

Table 3 Number of Registered Users at Baseline and at the End of the Intervention

Model	Catchment Areas	June 96	March 98
1	Makanjira	183	506
2	Katuli	99	572
2	Namwera	148	1,227
3	Monkey Bay	25	1,223
3	Nankumba	7	566

The number of first time contraceptive users recorded at baseline and during intervention in each catchment area can be seen in table 4. In all catchment areas except Makanjira, the number of new acceptors significantly increased between baseline and the end of intervention ($p < 0.05$). The increase was 1.4 fold in Katuli, 2.1 fold in Monkey Bay, 2.6 fold in Namwera and 6.2 fold in Nankumba (table 5).

Table 4 Number of New Acceptors per Catchment Area at Baseline and at the End of the Intervention

Catchment Areas	Baseline	Intervention
Katuli	77	107
Makanjira	28	28
Monkey Bay	104	150
Namwera	91	193
Nankumba	29	110

Table 5 Odds Ratios Showing the Likelihood that the Number of Registered Users and the Number of New Acceptors Increased from Baseline to Intervention

	CPR	New Acceptors
Katuli	5,97**	1,44*
Makanjira	2,78**	1,00
Monkey Bay	74,21**	2,11**
Namwera	10,23**	2,57**
Nankumba	133,13**	6,15**

* p < 0 05, ** p < 0 01

COMPARISONS ACROSS MODELS

Background and Comparison Indicators

Background and comparison indicators were collected at baseline to assess whether the different catchment areas were relatively equivalent. Data was collected on the following variables: distribution of villages around the health center, accessibility of other sources of FP, services offered at the health center and their gross utilization, number of outreach clinics, and number of FP providers per health center. The results are summarized in a table 6.

Table 6 Background and Comparison Indicators Collected at Baseline

Indicators	Model 1	Model 2		Model 3	
	Makanjira	Katuli	Namwera	Monkey Bay	Nankumba
Access to HC					
Number of villages located					
• less than 5 km from HC	9	10	7	5	4
• 5-9 km from HC	14	17	23	4	9
• 10-19 km from HC	7	60	12	2	9
Access to Other Medical Centers					
• Distance to large referral hospital	80 km	63 km	-	60 km	70 km
Estimates of HC Based Activities for 1996					
• Antenatal visits	4325	4612	7369	5162	-
• Deliveries	262	214	403	673	195
• Under-5 visits	8118	4757	23, 336	14018	3489
• Total number of visits	22,505	11,570	51, 866	38,893	-
Outreach Clinics per Month					
• antenatal	2	0	4	0	1
• Under-5	2	3	4	1	3
HC Staff					
• Total staff size	13	7	12	16	6
• Trained FP Providers					
• Nurses	2	2	4	8	1
• HSAs	1	1	1	1	1
• Ward Attendants	1	0	1	1	0

The utilization of health center services in the year prior to the study was highest in Namwera, followed by Monkey Bay and Makanjira, and lowest in Katuli and Nankumba. The total staff size was highest in Monkey Bay, followed by Makanjira and Namwera and approximately half in Katuli and Nankumba. The number of trained FP providers at each center followed a similar trend: Monkey Bay, Namwera, Makanjira, Katuli and Nankumba (in decreasing order). These data point to an "overstaffed" and very active health center for the Monkey Bay area, which only deserves a population of approximately 14,000. On the opposite end of the spectrum, the Katuli catchment area has a relatively understaffed health center providing fewer services to the population of over 23,000.

This pattern was reversed for the number of outreach clinics per month. The highest number of outreach clinics was found in Namwera, followed by Makanjira and Nankumba, slightly lower in Katuli and only once a month in Monkey Bay.

Quality and Quantity of FP promotion

Table 7 shows the quantity of FP promotional talks given in each community. Data was not pooled per model since model 1 was implemented in only one catchment area. Although no statistical analysis was performed, it can be observed that the number of talks was highest in Namwera and relatively low in Katuli and Makanjira.

Table 7 Number of Group Talks Given by HSAs, CBDs, and FPPs in Each Catchment Area

Catchment Areas	HSAs	CBDs	FPPs	Total
Makanjira	122	0	111	133
Katuli	37	0	34	71
Namwera	122	0	204	326
Monkey Bay	114	95	0	209
Nankumba	153	125	0	278

To assess the quality of FP promotion, HSAs filled out a questionnaire measuring their knowledge of contraception. The knowledge of contraceptive methods was highest in models 1 and 3 (85% and 86.7% accuracy respectively) and slightly lower in model 2 (73.3%).

Outcome Indicators

Odds ratios showed that model 3 was significantly more likely than models 1 and 2 to be associated with a higher number of registered users of contraception ($p < 0.01$) (table 9). Model 2 was significantly more likely to produce a higher number of registered contraceptive users than model 1 ($p < 0.01$). Models 2 and 3 were significantly more likely than model 1 to attract first-time contraceptive users ($p < 0.05$), but no significant differences were observed between models 2 and 3.

Table 9 Odds Ratios Showing the Likelihood that the Number of Registered Users and the Number of New Acceptors Differed Across Models from Baseline to Intervention

Models		Registered Users	New Acceptors
1	Baseline	183 (2 vs 1 2,63**)	28 (2 vs 1 1,79*)
	Intervention	506	28
2	Baseline	247 (3 vs 2 7,68**)	168 (3 vs 2 1,09)
	Intervention	1799	300
3	Baseline	32 (3 vs 1 20,2**)	133 (3 vs 1 1,95*)
	Intervention	1789	260

* $p < 0.05$, ** $p < 0.01$

In table 8, model 2 was found significantly more likely than models 1 and 3 to be associated with a higher number of 6-months dropouts ($p < 0.01$). No significant differences in dropout rates were found between models 1 and 3.

A large proportion of the dropouts interviewed moved away from their village, and the reason for dropouts could therefore not be assessed. Among the small number of recipients who did not move away, an assessment was made to verify whether individuals had their intention met upon leaving the program. A qualitative assessment was done to compare the percentage of individuals with intention met in the 3 models (table 10). The percentage of intention met was highest in model 1 (75%), followed by model 2 (65%) and model 3 came last (45%). For the group whose intention was met, disruption of service was due to a desire to have a child, menopause, abstinence, or separation from a husband. For clients whose FP needs were not fulfilled by the program, the reasons for discontinuing the services were as follows: side effects, fears, disapproval by husband, desire to take a break, tediousness of tablets intake, missing a DMPA appointment or failing to take the pill, unexpected pregnancy, and poor service (lack of privacy at hospital, distance to the health center, disruption of DMPA service by HSA).

Table 8 Odds Ratios Showing the Likelihood that the Number of 6-Months Dropouts Differs Across Models

Model	Number of Dropouts	Number of Participants	Odds Ratios
1	24	445	4,02** (2 vs 1)
2	343	1584	0,39** (3 vs 2)
3	107	1265	1,57 (3 vs 1)

Table 10 Percentage of 6-Months Dropouts Whose Intention was Met Upon Leaving the Program

Models	Number of Dropouts	Number of assessments made for intention met	Number of Clients Who Moved away	% Intention Met
1	24	22	8	71
2	425	50	24	65
3	117	52	4	45

DISCUSSION

Despite the flaws in study design and implementation, the study results shows that the use of other service providers such as CBDs and HSAs, in addition to HC FP providers, does increase contraceptive use. This, however, has no policy implications for Malawi since the NFPCM is already promoting the establishment of CBD programs and the training of HSAs as "core" FP providers (to distribute condoms, spermicides and OCs) in all districts. The component of the operations research which had direct policy implications was the concept of "specialized" HSAs and in particular the use of HSAs to provide DMPA injections. The project's "specialized" HSAs were trained to promote and deliver community-based hormonal contraceptive services, including OCs and injectable DMPA. They received the regular, 6-week government-approved HSA training, followed by 2 weeks of additional training in FP and at least 2 weeks of supervised practical work attached to a certified HC FP provider in order to be certified as approved to administer DMPA. With their specialized training in FP, including DMPA injections, the SC/US HSAs have been instrumental in increasing access to DMPA, which currently is the most popular method. However, the project was asked by MOHP head office for HSAs to stop giving DMPA injections. The project complied with this instruction and HSAs ceased to give DMPA injections. This disrupted the research protocol.

The issue of HSAs administering DMPA deserves further consideration by the Ministry. The practice had been supported and informally approved by the DHO as an innovative, experimental approach in the SC/US STAFH Project. Given the popularity of DMPA as a contraceptive method in Malawi, the NFPCM is interested in the potential impact of HSAs delivering DMPA if it can be demonstrated to be safe and effective. All indications and reports from both HC providers and the community suggest that the HSAs were well trained and carefully supervised and certified prior to undertaking this practice under the SC/US STAFH Project, but no quality of care or adverse event data were systematically collected on the practice under STAFH. Treating it as a research question might be an interesting option, to allow a careful, formally approved evaluation of the practice without contravening current MOHP policy or assuming future policy change. SC/US and the NFPCM are currently in dialogue with MOHP head office to conduct an MOHP head office approved OR on the issue.