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**Integration of STI and HIV/AIDS Services
with MCH-FP Services:**

**A Case Study of the Mkomani Clinic Society
in Mombasa, Kenya**

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Amina Twahir

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April 1996

The Population Council

The Population Council seeks to help improve the well-being and reproductive health of current and future generations around the world and to help achieve a humane, equitable, and sustainable balance between people and resources. The Council analyzes population issues and trends; conducts biomedical research to develop new contraceptives; works with public and private agencies to improve the quality and outreach of family planning and reproductive health services; helps governments to influence demographic behavior; communicates the results of research in the population field to appropriate audiences; and helps build research capacities in developing countries. The Council, a nonprofit, nongovernmental research organization established in 1952, has a multinational Board of Trustees; its New York headquarters supports a global network of regional and country offices.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AIDSCAP	AIDS Control and Prevention Project
ANC	Antenatal Care
BCG	Bacilli Calmette Guerin
CBD	Community-based Distributer
CSW	Community Service Worker
CWF	Child Welfare
CPR	Contraceptive Prevalence Rate
DPT	Diphtheria Pertussis and Tetanus Vaccine
FP	Family Planning
FPIA	Family Planning International Assistance Project
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
KDHS Kenya	Demographic Health Survey
MCH	Maternal and Child Health
MCS	Mkomani Clinic Society
MOH	Ministry of Health
NACP	National AIDS Control Program
NGO	Non Governmental Organization
OR/TA	Operations Research/Technical Assistance
REDSO	Regional Economic Development Services Office
RTI	Reproductive Tract Infection
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
USAID	United States Agency for International Development
VDRL	Venereal Disease Research Laboratory

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Executive Summary

Mombasa Municipality has continued to experience high HIV and AIDS prevalence rates. Data from the National Sentinel Surveillance system show that the prevalence of HIV infection among women attending antenatal clinics in Mombasa rose from 10% to 16% between 1990 and 1993. In 1994 the two Mkomani Clinical Society (MCS) clinics served 5,119 antenatal clients, and if these infection rates are applied, the implication is that 819 of the women would have tested positive for HIV infection had routine testing been available. Interviews with clients attending the two MCH-FP clinics found that a majority of the women considered themselves at risk for sexually transmitted infections (STIs) and HIV/AIDS, while their understanding of these issues was poor. Given these high prevalence rates and poor understanding among clients, there is clearly a need to strengthen the provision of STI and HIV/AIDS services. The MCS has recently developed a model for integrating STI and HIV/AIDS services into existing MCH-FP services. The aim of this case study was to document this process and to identify its strengths and weaknesses so that lessons learned can be widely disseminated.

The model developed by the MCS for its integration activities utilizes both clinic and community-based approaches to service delivery. The main activities to be carried out within this model include:

- routine STI/HIV/AIDS risk assessment and IEC activities for all clients visiting the clinics for family planning (FP) and antenatal services or bringing their children for child welfare services (MCH);
- diagnosis and treatment of STIs;
- syphilis testing for all antenatal clients;
- contact tracing.

Both clinics have an adequate supply of basic equipment and other requirements for providing STI and HIV/AIDS services in addition to the MCH-FP services. The only deficiency is adequate waste disposal facilities. The MCS management has already identified this as a problem and is taking steps toward the construction of their own incinerator. The physical infrastructure at both MCS clinics would benefit from further improvements to meet the special needs of integrating STI and HIV/AIDS services with MCH/FP services, as the current structures do not facilitate client flow between the services, group IEC activities, or provide for adequate client privacy. The MCS management has tried modifying the existing structures, but there is a physical limit to the amount of renovation that can be done to a permanent structure. Both MCS facilities would benefit from more appropriate IEC materials on STIs and HIV/AIDS for use in the clinics and in their community-based activities. Although IEC materials developed by the National AIDS Control Program are available, they were found unsuitable by the MCS, and so the MCS hopes to develop its own materials in the near future.

The MCH-FP nurses serve a large volume of clients on a daily basis; the data available for 1994 show that 22,551 MCH-FP clients were served at both clinics. At that time there was only one nurse in each MCH-FP unit, and so each nurse was serving, on average, 34 clients daily. At the time of the case study, two nurses had just been recruited to help ease the workload in the MCH-FP unit.

Although most staff at MCS clinics have not attended any formal training courses on STI and HIV/AIDS management, the MCS has organized in-house training sessions for all cadres of staff. The only nurse with formal training in HIV/AIDS counseling is, however, not being fully utilized because she has been allocated responsibilities in the minilap theater. Although many of the staff interviewed understood the key concepts of providing an integrated service, most did not fully implement key elements such as risk assessment and screening when providing services to MCH-FP clients. Some staff do not ask risk assessment questions because they believe that such questions are offensive to clients.

During the first two years of introducing an integrated approach, there were no formal guidelines, protocols or service manuals to assist clinic staff in implementing the activities. The absence of these has made supervision and evaluation of staff performance difficult. A process to develop these systems has since been initiated with assistance from Pathfinder International.

The MCS was created originally as a philanthropic organization to provide services at minimal costs to the low income and under served members of society. Due to the rising costs of providing these services, however, clients are now asked to share some of the costs with the MCS. The portion contributed by clients has gradually increased. Services such as STI treatment and HIV/AIDS screening, are now proving to be beyond what some clients can afford.

A cost analysis was carried out to complement this case study. A key finding was that the cost to the MCS of providing family planning and STI services separately, to a new family planning client choosing to use the pill who also required an STI services, would be US\$12.4. The cost of providing the same services using the integrated approach would be US\$8.6, representing a saving of US\$3.8 per client visit. This cost analysis did not include, however, the capital costs (e.g., training, renovations, etc.) that the MCS has had to put in place to facilitate the integration of these services. With these costs included, the actual saving will be less. The savings would also vary depending on the family planning method accepted and the STI services received by the client.

Introduction

Most national MCH-FP programs and donors in Sub-Saharan Africa are shifting their programmatic strategies toward a broader reproductive health service approach, which would include integrating STI and HIV/AIDS services into the existing MCH-FP programs. This shift is based on the belief that integration of these services will lead to more cost-effective and better quality services. The medical and moral responses to the HIV/AIDS pandemic in the region have also encouraged the shift in service delivery strategies. There is an assumption that the basic infrastructure that exists for the MCH-FP programs can absorb the extra demands of the STI/HIV/AIDS services with minimal additional inputs. There is also the assumption that staff providing MCH-FP services require only minimal training to be able to provide STI/HIV/AIDS services. Both MCH-FP and STI/HIV/AIDS services target similar populations (i.e., the sexually active), and therefore integrating them could maximize use of existing resources. There is a further assumption that the addition of STI/HIV/AIDS services to the existing MCH-FP services may also be acceptable and will reduce the stigma associated with providing STIs and HIV/AIDS services in isolation.

Efforts to date to integrate services have been mostly pioneer projects that have not been adequately documented and shared. To address the need to learn from the many experiences of integration that currently exist in the region, a consortium of service and research agencies has been established with USAID funding. The consortium includes USAID Africa Bureau, USAID/REDSO for East and Southern Africa, The Population Council, Pathfinder International, BASICS project and Family Health International's AIDSCAP Project. This consortium is undertaking a series of activities to better understand the problems and solutions, benefits or lack of the same in integrating STI and HIV/AIDS services with existing MCH-FP services in the region. As its contribution to this effort, the Population Council, through the Africa OR/TA Project II, is carrying out a number of case studies of projects and programs that have initiated integrated services with MCH-FP services.

This report describes a case study of the integration activities being undertaken by the Mkomani Clinic Society (MCS) in Mombasa, Kenya. The case study was carried out in 1995 by the Population Council in collaboration with the Mkomani Clinic Society and Pathfinder International.

Background

Mombasa Municipality/District

Mombasa Municipality shares the same administrative boundaries as Mombasa District in the Coast Province, covering an area of 210 square kilometers on the east coast of Kenya. According to the last census, in 1979, Mombasa had a population of 341,148 people¹. This represented a 27.6% increase from the population in 1969, with an annual growth rate of 3.3%; consequently, the population in 1993 was estimated at 589,379 people of whom 137,787 were women in the age group 15-49 years.

The Kenya Demographic and Health Surveys (KDHS) show that there has been a steady increase in modern contraceptive use in Kenya, with an accompanying drop in the total fertility rate (TFR). The most recent DHS (1993) found the national contraceptive prevalence rate (CPR) to be 27.6% with a TFR of 5.4. The CPR for Coast Province for modern methods was 16.6%, making it the Province with the lowest CPR in Kenya².

Further analysis of the 1993 DHS for Mombasa showed that the CPR was 23.0%³ (Figure 1) and the TFR was 3.3, similar to that of other urban areas. A significant proportion (23.4%) of women were defined as having an "unmet need" for family planning; of these women, 74% had an "unmet need" for spacing rather than limiting.

In Mombasa, the non-governmental sector provides most of the contraceptive services. The 1993 KDHS found that 56% of women who

1 Central Bureau of Statistics. *1979 Census Reports*, Nairobi, Kenya

2 National Council for Population and Development, Central Bureau of Statistics, and Macro International Inc. *Kenya Demographic Health Survey, 1993*. NCPD, Nairobi, 1994.

3 Centre for African Family Studies, John Snow Inc/Seats Project and Center for Population and Family Health, Columbia University. *Findings from the Sub-Saharan Africa Urban Family Planning Study: Mombasa City Report*. March 1995.

were currently using a modern method had obtained it from facilities sponsored by non governmental organizations (NGOs). The Mkomani Clinic Society is the leading source of family planning services among the NGOs operating in Mombasa.

According to MOH records, of the 20,008 infants who survived through the first year of life in Mombasa District in 1991, 85.3 percent received BCG, 84.2 percent had the first DPT, but only 64.3 percent had measles vaccination. Of the 22,035 women reported as pregnant in 1991, only 55.8 percent were vaccinated against tetanus⁴.

In 1990, a total of 453,298 clients were seen as outpatients in Mombasa. Of these, 3.0 percent had gonorrhoea while another 2.7 percent had symptoms suggesting a genital infection. Since the number of outpatient clients includes children and others who are not sexually active, the actual prevalence of these conditions within the sexually active population is much higher. These numbers represent only those clients who presented with symptoms and/or signs to the outpatient clinics.

The number of AIDS cases reported in Kenya rose from 1,246 in 1987 to 41,210 in 1993. Mombasa District has consistently had the highest proportion of AIDS cases for any urban centre, with 11,571 recorded in 1993⁵ (Figure 2), although this proportion appears to be decreasing over time. In 1987, Mombasa District accounted for more than 60% of all the AIDS cases reported nationally, whereas by 1993, just below 30% of cases nationally were reported in Mombasa. Whether this reflects a greater increase in prevalence in other urban areas or simply better reporting over time in the other urban districts is not clear.

In 1990, the National AIDS Control Program (NACP) established a sentinel surveillance system to monitor the progress of the HIV epidemic. Data from the Mombasa sentinel surveillance center show that the number of pregnant women testing HIV Positive in Mombasa rose from 10.0% in 1990 to 16% in 1993 (Figure 3 overleaf).

4 Ministry of Health. *Health Information Systems Statistical Bulletin*, Nairobi, March 1993.

5 National AIDS Control Program, Ministry of Health and National Council for Population and Development. *AIDS in Kenya: Background, Projections, Impact, and Interventions*, Nairobi, July 1994.

In summary, many women in Mombasa still have unmet contraceptive needs and are experiencing a rapid rise in the prevalence of HIV infection. The proportion of children immunized against measles remains low while many pregnant women are not immunized against tetanus. Innovative approaches to the delivery of reproductive and child health services must be identified to respond to these pressing challenges. The integrated approach to the provision of reproductive health services is believed to be one cost-effective way of addressing the challenge.

Mkomani Clinic Society

The Mkomani Clinic Society (MCS) is a private charitable organization founded in 1980 by a local philanthropist, Mrs. Hayati Anjarwalla, with assistance from other concerned women, prominent personalities and the business community in Mombasa. The objective of the organization was to make basic medical services accessible to the less fortunate members of society. The organization started providing basic curative services at a clinic constructed on a site called Mkomani, donated by the community in Kisauni Division. This clinic, known as the Mkomani clinic, started operating in the same year the society was formed. Besides basic curative services, the clinic also provided antenatal care (ANC) and child-welfare (CWF) services.

With assistance from the Rotary club of Kilindini and from USAID through Family Planning International Assistance (FPIA), the Society expanded and modified the physical facilities at the Mkomani clinic to provide family planning (FP) services in 1982; these expanded facilities provide the whole range of family planning methods. After that, FP services have formed an integral part of the health services that the society provides to the community. Until 1992, however, the FP, ANC and CWF services were provided as separate services on different days. In 1986, the Society obtained another piece of land in Changamwe Division, again in a low income, densely populated area, called Bomu. A second clinic was constructed on this site with financial assistance from the American Embassy in Kenya. The new Bomu clinic started providing services to the public similar to those offered at the Mkomani clinic in the same year.

Since 1990, the MCS clinics have received technical and financial assistance from several organizations, but most prominently from Pathfinder International through USAID funding. The technical assistance and funding have been used to support and strengthen management systems, family planning service delivery and supply of equipment. The funds have also been used in the improvement and expansion of laboratory services at the second MCS clinic in Bomu.

Both MCS clinics are open to the public on Mondays to Fridays from 8.00 a.m. to 5.00 p.m., and on Saturdays from 8.00 a.m. to 12.30 p.m. The clinics are extremely popular and have very heavy client loads: for example, in 1994, the two clinics served 22,551 MCH-FP clients alone. As shown in Figure 4, the majority were family planning clients. During this period, 894 clients (i.e., 4% of the total) were treated for STIs/RTIs.

Basic laboratory facilities back up the services at each clinic. The clinics use laboratory facilities at other institutions for those tests that are not available within their own laboratories.

Besides the clinic-based services, the MCS has a community outreach program. The program was started in 1982 with six extension workers whose main responsibility was to raise awareness about family planning. They did not provide any specific counseling or methods to the clients. The number of extension workers was increased to 30 in 1992 and at the same time formal training as community-based distributors was provided. Their roles and terms of service changed to reflect the new situation. These 30 Community Service Workers (CSWs) are employed with salaries by the MCS through funding from Pathfinder International. The approach adopted by the MCS is different from most of the other community-based distribution programs in Kenya in that the CSWs are full-time, salaried employees. The CSWs motivate clients for all MCH-FP services provided by the two clinics. They initiate and resupply continuing-clients for the pill, condom and spermicide. Clients choosing to use clinical methods other than the pill are referred to the clinics for further services.

In 1994, the 30 CSWs reached a total of 48,983 persons individually (i.e., an average of 1,633 visits per CSW), and organized 1,223 public meetings that were attended by 15,533 persons. During this period, the CSWs recruited 11,580 new family planning clients (an average of 386 per CSW) and resupplied family planning methods to 16,872 clients (an average of 562 per CSW). It is worth noting that these average client loads are very high for any CBD programme in Kenya⁶ and are also higher than many fixed clinics. The majority of family planning clients served by the CSWs were using contraceptive pills. The number of clients motivated and referred to the clinic for other MCH-FP services (known as “effective referrals”), including STIs and HIV/AIDS, is not recorded in the service statistics.

Integration of STI/HIV/AIDS services with MCH-FP services

6 Jackie Mundy and Ian Askew. 1994. *Current experiences with community-based distribution of family planning in Kenya: a review prepared for USAID/Kenya*. The Population Council, Nairobi, Kenya.

Prior to 1992, STI/HIV/AIDS services were available only at the curative services department in each clinic. Clients coming for family planning, antenatal, and child welfare services who also needed STI/HIV/AIDS services were referred to the curative department. The nurse responsible for the MCH-FP services at the Mkomani clinic observed that many MCH-FP clients also needed STI/HIV/AIDS services. However, they did not like being referred to the curative department, as they felt that the curative department did not offer the same confidentiality and client-provider relationship as the MCH-FP unit. The clients also felt that the time required to receive the two services was doubled as they had to queue twice and be attended by two different service providers. In 1992, the MCH-FP clinic nurse started providing basic IEC and counseling on STI/HIV/AIDS to clients on her own initiative. She found, however, that this increased her workload and the time spent with each client. There were complaints by some MCH-FP clients who felt that they did not require the STI/HIV/AIDS services she was providing. On noticing this individual effort to respond to clients' needs, the MCS management decided to adopt and institutionalize an integrated approach to the delivery of STI, HIV, AIDS and MCH-FP services.

To the MCS management, integration means facilitating clients to have all their health needs and concerns met within the department where their primary health concerns are being addressed on the same clinic visit. This has meant that STI and HIV/AIDS services have had to be added to the existing MCH-FP services. Once the MCS management agreed to adopt and institutionalize an integrated approach, consultations were held with staff at all levels. The purpose of the consultations was to develop an institutional framework within which the STI and HIV/AIDS services could be provided without disrupting the existing MCH-FP services. The major outcome of these consultations was the development and implementation of the model described overleaf.

The process of integrating STI/HIV/AIDS services with the MCH-FP services has gradually picked up momentum and the MCS management has already undertaken the following activities to facilitate the process:

1. Two more community nurses have been recruited to help in the provision of the MCH-FP, STI and HIV/AIDS services.
2. In-house seminars have been conducted for all the nurses to introduce them to the use of the syndromic approach for the diagnosis of STI/HIV/AIDS.
3. The MCS organized seminars for support staff on protection against STI/HIV/AIDS, safe waste disposal mechanisms, modes of transmission of STI/HIV, and safe sexual practices.
4. The CSWs attended in-house workshops where they discussed topics on STI/HIV including modes of transmission, safe sex practices and condom use.
5. The process to develop protocols and guidelines for service providers at all levels has been started.
6. Improvements and expansion of the range of laboratory services available at the second MCS clinic in Bomu to include tests for the common STIs.

1. Carry out a risk assessment for STI/HIV/AIDS among all clients visiting the clinics for ANC, CWF, and FP services.

2. Provide information on STI/HIV/AIDS to all clients who receive any services at the clinics or from the CSWs.

3. Inform the public about STIs and HIV/AIDS and the availability of services at the MCS clinics through public meetings and seminars.

4. Protect health personnel and MCH-FP clients from infection during clinic procedures.

5. Request and/or refer all ANC clients for syphilis testing.

6. Diagnose and treat common STIs within the MCH-FP unit.

7. Identify and refer all clients with symptoms/signs of HIV infection, or those requesting HIV testing, to institutions with established HIV counseling and testing facilities.

8. Carry out contact tracing, risk assessment, screening, diagnosis and treatment for the contacts..

The remainder of this report presents the results from a case study undertaken to learn more about how the process of introducing this integration model was implemented, to assess the “preparedness” of the clinics and MCS to implement the model, and the experiences to date, from both the providers’ and clients’ perspective. Results from a cost analysis study undertaken simultaneously are also presented.

Study Methodology

The Africa OR/TA Project II, in collaboration with other consortium members, has developed a methodology for conducting case studies of programs and projects that have developed an integrated approach to providing STI, HIV, AIDS and MCH-FP services. This methodology was used to carry out this case study of the Mkomani Clinic Society. The cost analysis component of the study was carried out under the auspices of the USAID/REDSO Networking Program.

Review of available data and reports: The KDHS reports, MOH Annual Reports, Census reports, and various reports and strategic plans prepared by the MCS were reviewed. The review was used to establish the characteristics of the catchment area and population, fertility indices, contraceptive practices and statistics of STIs, HIV and AIDS. The review was also used to trace the evolution of the MCS services to the time of the case study and to identify future plans.

In-depth interview with Program Director: The MCS Program Director was interviewed using a semi-structured interview guide. The interview guide covered the Director's understanding of the integration process, the historical evolution of the integration process (why, how and when did the process start), the type of integration model and its components, activities carried out to facilitate the process, resource mobilization and budgeting, monitoring and evaluation activities, policy commitment, experiences to date and future plans.

Situation Analysis: Using a modified Situation Analysis approach (based on the approach developed and used by the Population Council to study family planning programs in the region), data were collected on the status of clinic facilities, management information systems, personnel, client experiences at the clinics, the non clinic-based service delivery systems, and service statistics. With this approach, data are collected using a clinic inventory, interviews with staff, and exit interviews with FP and MCH clients. The modification involved an expansion of the existing data collection instruments to include questions on staff and client knowledge of STIs, HIV and AIDS, staff use of STI management procedures (risk assessment, diagnosis, treatment, counseling, IEC and referral), and the actual and potential mechanisms for integration of STI/HIV/AIDS services with MCH-FP services.

An inventory was prepared for each of the two MCS clinics using a modified inventory data collection instrument. Information on accessibility, publicity, physical infrastructure, supplies, equipment, commodities and service statistics was obtained for each facility. All professional staff who provide MCH-FP services at the two MCS clinics were interviewed. This included five doctors, five nurses, one CSW coordinator and two laboratory technicians. With the exception of the two laboratory technicians, all the other staff were interviewed using the modified staff interview guide. Interviews were held with 14 of the 30 CSWs working with the MCS services. All the 14 CSWs interviewed were providing the basic MCH-FP services that include: motivation and counseling for all MCH-FP services, distribution of non prescription methods of family planning including oral contraceptives, referral for prescription methods and follow up of MCH-FP clients.

A total of 36 women who received MCH-FP services at the two clinics were interviewed about their interactions with the MCH-FP clinic staff. The majority, 19, had attended the clinic

for FP services, while 14 attended for ANC. Three of the women came to the clinic for other reasons.

Cost analysis: This involved the determination of the unit costs for providing the various services within the MCH-FP unit at both MCS clinics. To do this, the MCH-FP unit was divided into cost centers. Each cost center represented a specific service type or area:

- Laboratory
- Family planning (Community-based services)
- Family planning (Clinic-based services)
- MCH services (antenatal, postnatal, child welfare)
- Out patient (curative services including STI services)
- Pharmacy (for curative services)
- Administration

The recurrent direct, indirect, variable and fixed costs for each of the cost centers were determined. The direct costs were calculated using the pay roll and trial balance sheets for the financial year ending on December 31, 1994. These were used to determine the labor, drugs and other supplies' costs that could be directly attributed to the various cost centers. The distribution of the direct costs was used to allocate the indirect costs that included administrative staff costs, utilities and insurance, etc.

A sum for each cost center was then obtained by adding the direct, indirect, fixed and variable costs for that cost center. The service statistics for 1994 in each of the cost centers were used to calculate the unit cost by dividing the sum of the costs by the number of services provided. In this analysis, the number of visits made for the various services was used as the unit to be costed. For example, the unit cost for family planning services represent the average cost for one visit to the family planning clinic by a client. Using the same approach, the cost of providing STI services alone and in combination with family planning services for a new client were calculated. The staff time was determined by asking them to estimate an average time in minutes spent providing the various services. The estimates obtained this way for family planning services were comparable to that found in the recently completed second Kenya Situation Analysis study⁷ and the Mombasa Urban Family Planning Situation Analysis⁸ study. In both studies, the actual time that a family planning client spent with staff members was determined through observation by trained interviewers.

7 In the recent national Situation Analysis study (unpublished to date) it was found that on average this interaction lasted for 30-38 minutes. The service providers at the MCS clinics estimated that they on average spend 30 minutes with a new family planning client.

8 *Op. Cit.* Footnote #3.

Principal findings

1) Preparedness of MCS to offer integrated services

a) Clinic Facilities

Physical Infrastructure: Both clinics are in low income, densely populated areas within Mombasa Municipality. The clinics have mains electricity and in cases of failure, a standby generator is available to support the lighting system at one of the clinics. Besides the piped water supply, the two clinics have water tank reservoirs that give them adequate supplies for a couple of days in case of shortages.

At the time the clinics were constructed there was little, if any, emphasis on client counseling, privacy or group IEC activities. The success of the program was judged primarily by the number of clients served. For example, during the construction of the first MCS clinic at Mkomani, no provision was made for waiting rooms, and so clients have to wait in the corridors. These corridors are narrow with high walls, and poor ventilation or lighting, conditions which are exacerbated by Mombasa's hot and humid climate. These conditions also make it difficult to display IEC materials or carry out group sessions for waiting clients. Although the physical facilities are better at the Bomu clinic, they could also benefit from further improvements.

Counseling and Examination Rooms: At both clinics, separate rooms or areas are used to counsel and examine clients. At the Mkomani clinic, the examination and counseling areas for MCH-FP clients are separated by a soft board which does not completely separate the two areas and is not sound proof. One of the clinic doctors and the MCH-FP nurse share the examination area. Apart from using the area for reviewing MCH-FP clients, the doctor also uses this area as the consultation room for other types of clients. Sometimes, the nurse has to examine MCH-FP clients when the doctor is also present with another client, further compromising the visual and audio privacy for the MCH-FP clients. Alternatively, clients have to wait until the room is free, thus increasing their waiting time.

A second nurse has been recruited to help with the MCH-FP services at the Mkomani clinic. Since the two nurses have to share the one counseling room, examination area and other facilities, although the second nurse helps reduce the workload, her presence further compromises the clients' privacy and may not help in reducing client waiting time.

The examination and counseling rooms at the Bomu clinic are separated by a space used as a waiting room, and so after counseling clients have to walk across the waiting area to get to the examination room, which compromises the privacy of those women requiring examinations. Since most MCH-FP clients do not have examinations, those who do may be suspected by their fellow clients of having other problems. The movements from one room to the other also wastes staff time.

A complete assessment of clients with symptoms/signs suggesting an STI or HIV/AIDS requires an examination of their genital organs and discussion of their sexual behaviors, procedures which can only be done in strict confidence. The lack of privacy in the counseling and examination facilities at the two clinics does not facilitate the provision of such services.

Equipment and supplies: Both MCS clinics have adequate basic equipment and supplies to provide STI/HIV/AIDS services with the MCH-FP services. Each clinic has a modern examination couch, angle poise lamp, adequate supplies of vaginal specula, antiseptic solutions, gloves and other consumables. An autoclave for sterilizing reusable instruments, equipment and supplies is available at each clinic and both are in good working condition. A steam sterilizer is shared by the two clinics whenever the autoclaves cannot be used due to low water pressure, a common problem in Mombasa.

Although there is no specialized vaccine refrigerator at either clinic, staff use ordinary refrigerators to store the vaccines. Due to frequent power failures, however, the MCS has had problems with maintaining the cold chain, and as a result, vaccines have to be disposed occasionally.

There are no proper sharps' disposal facilities or an incinerator. Used instruments or supplies are disposed by first disinfecting through soaking in JIK (an antiseptic), then they are sealed in a plastic container and put into a deep pit at the municipal referral hospital. The MCS is exploring the possibility of building their own incinerator to further improve their waste disposal capabilities.

b) Staffing

The MCS employs 15 professional staff, including five doctors, one clinical officer, seven community nurses, and two laboratory technologists. These are assisted by two nurse aides, two laboratory assistants and 30 community service workers (CSWs).

Training: All doctors and nurses interviewed had completed their basic training more than ten years earlier, which included family planning, antenatal, postnatal, delivery and child welfare services. These nurses and doctors had also attended a post-basic course on family planning more than five years ago. These staff felt, however, that there have been major developments in family planning recently, and they all expressed a need for regular refresher and update courses.

Two doctors and one nurse have attended post-basic training in the management of STIs/HIV/AIDS. The only nurse who has been trained in HIV/AIDS counseling has been assigned to be responsible for the surgical contraception theatre where she spends most of her time and so has limited time for providing STI/HIV/AIDS services to other MCH-FP clients. All professional and support staff at both clinics have attended a series of in-house orientation seminars ranging from 1-5 days on modes of transmission of STI/HIV/AIDS, safe sex, condom use, prevention of cross-infections (for both the providers and clients) and disposal of contaminated instruments and supplies.

Job Description: When the MCS management decided to start an integrated approach, the staff were requested verbally to provide STI/HIV/AIDS services. Some staff members feel that they are being requested to take on responsibilities that are not within their original job descriptions without adequate compensation. Although the risk of getting HIV infection while providing services is small, some staff felt that they needed to be given the option to decide whether they would like to take this risk or not.

2) Implementation of the Integration Model

a) Risk assessment

A risk assessment for STI/HIV/AIDS for all clients attending the MCH-FP clinics is one of the main activities of the integration model. An essential aspect of any risk assessment procedure requires that the provider asks the client some questions about their sexual behavior. Figure 5 describes the frequency with which the 36 MCH-FP clients interviewed during the study reported having been asked questions about their sexual behavior.

Only nine of the 36 women were asked any questions about their sexual behavior. As can be seen, it appears that providers do not routinely ask these types of questions and therefore miss an opportunity for potentially identifying those at risk of high-risk behaviors.

A second aspect of routine screening which was assessed was the type of medical history taking which the providers carried out. Figure 6 describes the frequency with which the presence of certain potential STI symptoms were asked by providers. Again, the majority of clients reported that they were not asked about most of these key symptoms. A history or the actual presence of lower abdominal pain, vaginal discharge, genital ulcers and dysuria, the most commonly reported items, were asked of less than 10 of the clients.

Most women with STIs are asymptomatic, and so even asking them for these symptoms may not be a particularly effective means for screening. Asking women about a symptom could be problematic anyway as it appears that many women do not recognize the more common symptoms as being possibly related to an STI. During exit interviews, women were asked to name any symptoms and signs of sexually transmitted infections that they knew. As shown in Figure 7, vaginal discharge, lower abdominal pain and pain on passing urine were the most commonly mentioned symptoms. Genital ulcers and genital itching were mentioned by only 9 of the women interviewed.

Why staff do not seem to be routinely asking clients about their sexual behavior and possible STI symptoms is not immediately clear⁹. When asked, the MCH-FP clinic staff stated that they asked screening questions only if the client complained of symptoms or explicitly presented with signs that suggested an STI or HIV/AIDS. It is not clear, therefore, whether when clinic staff did ask these questions, if it was for screening or for diagnostic purposes, given that the clients already clearly had one symptom or sign suggestive of an STI or HIV/AIDS. It seems, therefore, that clinic staff are not fully aware of the difference between screening and diagnosis procedures.

The clinic staff gave several other reasons for not asking every MCH-FP client these questions. They felt that due to the high client loads they have to serve and the time required, it was not possible to screen all MCH-FP clients. The nurses also expressed a concern about asking clients who do not have any obvious symptoms/signs suggesting STI/HIV/AIDS about their sexual behavior. They believed that this would be an unnecessary intrusion on the clients' private lives which could discourage them from coming for other services. The nurses also thought that the MCH-FP clients were not comfortable discussing STI/HIV/AIDS with clinic staff. They believed that most clients could not easily identify the relationship between MCH-FP services and a discussion on STI/HIV/AIDS, and that having such discussions routinely was a waste of valuable time because the clients did not perceive themselves as being at risk of such diseases.

9 One possibility is that the clients themselves may have felt embarrassed being asked by the interviewer about this issue and consequently under reported the frequency with which they were asked by providers.

As Figure 8 illustrates, however, one quarter of the 36 MCH-FP clients interviewed did consider themselves at risk of STI/HIV/AIDS, and a further 44% were not sure. Less than one third felt that they were definitely not at risk. Moreover, a recent Situation Analysis study of MCH-FP clinics in Mombasa (including the two MCS clinics) found that 85% of clients would continue to use the same facilities even if STI/HIV/AIDS services were introduced¹⁰. Given these findings, it would appear that most of the fears expressed by the clinic staff about clients feelings regarding STI/HIV/AIDS services are not true.

During the exit interviews, the MCH-FP clients were asked whether they had experienced certain STI related symptoms during the past 12 months. Out of the 36 respondents, 19 clients said that they had experienced at least one of the common symptoms/signs associated with STI/HIV/AIDS (Figure 9). Vaginal discharge and genital itching were the most common symptoms experienced by the clients interviewed. This is a higher number than those who spontaneously mentioned symptoms associated with STIs, suggesting that not only is clients' knowledge of STI symptoms/signs poor, but also they do not recognize that they may have such symptoms themselves. This implies that if clinic staff wait for clients to spontaneously report symptoms before undertaking a risk assessment, many women who are at increased risk for STIs and HIV/AIDS will be missed.

b) Informing the public of service availability

The availability of STI/HIV/AIDS services at the two clinics does not appear to be well publicized. At both MCS facilities, there is a billboard announcing the services available, but although the board describes FP, ANC, and CWF services, no mention is made of STI/HIV/AIDS services. Furthermore, the MCS vehicles have only a FP logo printed on them.

When interviewed, the clinic staff felt that most MCH-FP clients do not know that they can get STI/HIV/AIDS services within the MCH-FP clinics. This perception was confirmed during interviews with the 36 women who had attended the two clinics for MCH-FP services. Most of the women interviewed were aware that FP, ANC and CWS services were available at the clinic (Figure 10), but only three of the 36 women were aware that STI/HIV/AIDS services could be obtained. Moreover, the three women had learnt of the availability of this service from

10 Op. Cit. Urban Family Planning Situation Analysis Study. Mombasa Report.

friends rather than from the clinic or clinic staff. Friends and relatives are a major source of information about the availability of all services at the clinic which may be a reflection of satisfied clients informing others of good experiences at the clinics.

c) Providing information on STIs/HIV

During this study, it was observed that there were no IEC materials with messages on STI/HIV/AIDS on display at either of the two clinics. Although the national STD and AIDS Control Programs have developed IEC materials, these have been found unsuitable for use within the communities served by the MCS. The available IEC materials are not target oriented according to the MCS management. Meanwhile, individual staff are expected to decide for themselves on the types of information to provide and the techniques to use when undertaking IEC activities. For example, individual counseling and group talks at the clinic and in schools are used to reach clients with messages on STI/HIV/AIDS.

Under the integration model, all MCH-FP clients are expected to be provided with information on STIs and HIV/AIDS. In addition to these activities at the clinics, the Community Service Workers (CSWs) are expected to carry out IEC activities in the community through public rallies and home visits. Through such activities, the community should be informed about the availability of STI and HIV/AIDS services at the MCS clinics. From interviews with clients however, it appears that the majority of MCH-FP clients do not get an opportunity to discuss STI/HIV/AIDS issues with clinic staff - only seven of the 36 clients interviewed reported having discussed STIs and HIV/AIDS related issues with the clinic staff. If this finding represents what generally happens at the clinics, the missed opportunities to discuss and inform women about STIs and HIV/AIDS at these clinics are enormous.

Promoting condom use is one proven strategy to help in reducing the rate of transmission of both HIV and STIs. Because of this, education about condom use and its role in the prevention of STIs and HIV transmission forms a major component of most health education and service delivery programs that include STI/HIV control. Indeed, the level of knowledge about and use of condoms in a community has been used as a population-based indicator in the evaluation of STI and HIV intervention programs.¹¹

The majority (30) of the 36 clients interviewed reported that they had not been told by the clinic staff about the role of condoms in preventing STIs and HIV/AIDS. This lack of

11 Mertens T., Carel M., Sato P., et al, Prevention Indicators for Evaluation of National AIDS control Programs. AIDS, 1994, 8:1359-1369.

information giving may help explain the clients' poor knowledge and attitudes about the role of condoms in STI/HIV prevention. Less than half of the clients mentioned condom use when asked about the ways they could protect themselves from STIs/HIV. The 36 women were asked to state whether they believed the condom was effective in preventing the spread of STIs, and HIV infection. As shown in Figure 11, thirteen women did not believe that the condom can protect one from getting infected with STIs or HIV while nine were uncertain. Clients' knowledge of ways through which they could get HIV infection apart from sexual intercourse was limited to blood transfusions and sharing of contaminated instruments. Only two clients were aware that a foetus could be infected by an HIV positive mother.

d) **Diagnosis and treatment of STIs**

Laboratory testing: The MCH-FP nurses refer all clients with symptoms/signs suggesting an STI or HIV/AIDS for laboratory testing. The clinic laboratories can carry out the VDRL test for syphilis, the gram stain for gonorrhoea, the monochrome test for Candida, and wet preparation microscopy for trichomoniasis. The MCS has arranged with the provincial hospital and other private facilities in Mombasa to carry out tests that are not available at their own clinics, including HIV testing. Clients requiring HIV tests are referred to these facilities where they also receive pretest and post-test counseling. The MCS has resisted the temptation of setting up its own HIV testing facilities because the management believes that the current staffing configuration cannot cope with the extra demands that HIV testing would create. In addition to treating those clients at the clinic who have been diagnosed as having an STI, the CSWs refer clients with symptoms or risk factors suggesting an STI or HIV/AIDS to the clinic nurses, who then take a history, examine and request for laboratory tests.

All laboratory specimens including high vaginal and cervical swabs are taken by the laboratory technologists themselves. The two technologists have not been trained formally in the anatomy of the female genital tract and so rely on their practical experience to obtain specimens that require the introduction of a vaginal speculum into the genital tract. Both the laboratory technologists are female and have worked with the MCS for five years. The practice of having the technologists take the swabs was introduced to reduce the workload on the MCH-FP nurse.

While the practice has succeeded, it has certain implications and limitations. For example, the clients' privacy is further compromised by the introduction of another person in their interactions with the clinic staff. According to the nurses working in the MCH-FP clinics, many clients have expressed concern about the intrusion by the technologist, and some have refused to have specimens taken for this reason. The technologists are usually based in the laboratories themselves which are located far from where MCH-FP services are provided; consequently, the MCH-FP nurse has to call or send for the technologist to come and obtain the specimen. This is often time wasting and inconvenient to the clients depending on the stage of the consultation at which the nurse decides that a laboratory test is required. If the nurse decides this after performing a pelvic examination, then the client will have to be physically exposed a second time for a specimen to be taken. This is not only inconvenient and potentially embarrassing to the client, but leads to wastage of supplies like gloves, cotton wool, and speculums as each consultation uses a supply that would have been adequate for two clients.

Treatment of STIs: Based on the findings of the clinical examination and laboratory test results, the nurses make a diagnosis and refer the client to the doctor, who reviews their findings and prescribes treatment. The MCS management does not allow nurses in the MCS clinics to prescribe any medications. Nurses with similar qualifications and training who work in public sector clinics are, however, allowed to prescribe medications for most illnesses they encounter, including STIs. This restriction imposed by the MCS management effectively limits the nurses' participation in providing an integrated service, as they are restricted to diagnosing and counseling clients only. The nurses believe that their inability to prescribe medications undermines the clients' confidence in them. This is because clients feel that the nurses are not as qualified as their counterparts elsewhere who are allowed to prescribe. Moreover, the need to refer clients to the doctor increases the overall consultation time for the clients as they may now have to queue twice for a service they would have received from one service provider.

The doctors usually follow the existing national guidelines and recommendations in deciding the treatment of STIs¹². However, this is sometimes not possible as most of the recommended regimens are very expensive. The clinics cannot afford to provide the expensive drugs at the small fee they charge for the services. Furthermore, the clients are from the poorer communities in Mombasa and cannot normally afford to buy drugs, even when they are requested to purchase them from elsewhere.

The clinics do not have stocks of drugs to be used specifically for the treatment of STIs. The clinic staff have developed a list of antibiotics treating all conditions that require antibiotic therapy. The list was developed using the common illnesses seen at the clinics and the cost of antibiotic drugs as a guide. The clinics currently stock the following antibiotics¹³:

1. Probenecid
2. Achromycin
3. Ampicillin
4. Procaine Penicillin
5. Panudur
6. Septrin
7. Flagyl
8. Whitefields ointment

The doctors' choice of drugs for treating STIs is limited to these drugs which are available at the clinics and the decision as to which drugs or combinations to use in treating STIs is left to the individual doctor. The doctors interviewed said that they have not encountered any major problems in using this approach as most of their clients respond well to the different regimes.

The MCS relies on a laboratory test to make a diagnosis and decide the treatment for STIs for most of the clients served. The laboratory test increases the costs to both the client and

12 It has been observed that some STIs are resistant to the regimens recommended for use by the national program.

13 This list falls short of the recommendations by both the national program and the World Health Organization.

the MCS. The need for nurses to refer all clients with STIs to the doctors for review and prescription also adds to the cost of providing these services. The MCS management could review these procedures for more cost-effective approaches.

Papsmear screening: The staff encourages all women attending the clinics for FP services to have a Papsmear test done at least once a year during the period that they are using a contraceptive method, but the clinic laboratories do not do Papsmear testing. The specimens are collected by the nurses and sent to a private laboratory that does the tests at a subsidized fee for all MCS clients. At one of the clinics, 414 women were tested in 1994 and 128 (30.9%) were found to have evidence of a current genital infection. These women were then referred to the doctor for treatment. The MCS management feels that the results from this external laboratory are not entirely reliable. They feel that there is under reporting of abnormal cytology. The MCS management is in the process of organizing training of its laboratory technologists in cytology techniques and equipping its laboratories to carry out cytological tests. They believe that this would reduce the costs and the time clients have to wait before receiving their results and treatment where necessary.

e) Screening ANC clients for syphilis

All antenatal clients seen at the MCH-FP clinics are routinely referred to the laboratory for syphilis testing as part of the integration model. Before being sent to the laboratory, the women are informed and counseled by the nurse about the importance of the test. The VDRL test for syphilis costs the client 80 Kshs (1.50 US\$) in addition to the 50 Kshs charged for the consultation. In reviewing clinic records, however, it was found that most clients do not actually get the tests done. At the Mkomani clinic, which served a total of 1,500 new ANC clients in 1994, only 398 (27%) had themselves tested for syphilis. Of those ANC clients actually tested, 18 (5%) had a positive VDRL test.

Untreated maternal syphilis infection has been associated with increased perinatal morbidity and mortality leading to poor obstetric outcomes. If this prevalence rate of 4.5% is extrapolated to the whole population of ANC clients attending the clinic (i.e., 1500), it suggests that 68 clients would test positive, but that only 18 are actually detected and treated; thus it is probable that around 50 women per year are leaving the clinic with an undetected syphilis infection. The clinic nurses believe that the additional cost for the VDRL test is a major factor in determining how many and what type of woman gets the test done. Since syphilis testing should be routine for antenatal clients, the MCS should consider other ways of financing this testing so that cost does not become a barrier¹⁴.

f) Contact Tracing

Contact tracing remains a major problem. Several approaches have been used but none seem to work to the satisfaction of the staff. The clients who come in contact with the clinic staff are verbally requested to inform their spouse/partner and request them to come for a check up and treatment. Apart from verbal requests, written notes have been sent to spouses/partners

14 For example, the charge could be included in the consultation fee and the 50.0 Kshs spread across several consultations.

through the client herself. Attempts to use the CSWs to trace the clients' contacts have met with stiff opposition from the clients themselves because the clients do not want anyone else to be involved in informing their partners. Although they usually offer to do this themselves, the poor results suggest that they probably make no attempt to inform the partner.

Contact tracing presents special problems in the community served by the MCS clinics. The community strongly condemns any form of extramarital sexual relationships, and as such single women who have an STI or HIV/AIDS find it very difficult to discuss their problems with anyone else. Polygamy is a common practice within Mombasa and women in these marriages fear informing their spouses because they will be accused of being responsible for introducing the infection in the home which may lead to divorce. Consequently, the fears of divorce and social discrimination usually override the need to inform the spouses about an STI. Polygamy also presents problems to a male client in identifying which wife to bring in as the contact.

3) Service provider attitudes and practices

Three of the five nurses interviewed felt that clients with HIV/AIDS should not use any form of contraception. They believed that contraceptive use by these clients would encourage them to have sex leading to further spread of the infection. They were also concerned that use of the hormonal methods would increase the rate of progression to AIDS for these clients whose immunity is already compromised. All nurses interviewed felt that clients with any STI, other than HIV, could use all methods except the IUD. This is because the IUD may increase the severity of pelvic inflammatory disease and its complications.

The nurses support the use of dual contraception for clients whose sexual behaviors put them at an increased risk for STI/HIV. All nurses claimed to have advised clients and given condoms for protective use in addition to other contraceptive methods during the three months before this study.

Two nurses said they are reluctant to provide family planning services to the youth. They felt that some side effects associated with contraceptive methods are not good for adolescents. They also believed that providing the youth with contraceptive methods would make them more promiscuous.

Attitudes such as these can be a major barrier to the success of any program that seeks to provide FP and STI services, and particularly those that seek to do so through an integrated approach. There is clearly a need for continuing education and counseling of service providers themselves with a view to encouraging them to adopt more positive attitudes and practices.

4) Cost Analysis¹⁵

Charges for FP and STI Services by MCS: Clients with symptoms suggesting STIs who are referred for laboratory tests have to pay an extra 50-80 Kshs (0.9-1.5 US\$) besides the standard consultation and treatment fee. The laboratory requires that the fee be paid before carrying out the tests. Failure to pay the fee may lead to delays in receiving treatment or even non treatment. This is because the nurses are only allowed to refer to the doctor those clients who have a laboratory test result. Although the director of the MCS has the power to waive fees for those clients who cannot afford them, the clinic staff believe that many clients are not aware of this possibility.

The total cost for obtaining STI treatment is much higher than for other services at the clinics. Besides the laboratory test charges, all clients are required to pay 70 Kshs (1.3 US\$) for a consultation and 100 Kshs (1.8 US\$) for the drugs. This means that an STI client must have 220-250 Kshs (4.0 - 4.5 US\$) before they can get treatment for an STI. Those clients receiving ANC, FP and CWF services, however, pay between 20- 50 Kshs (0.4 - 0.9 US\$) only, which includes the consultation and all supplies. The high costs for STI treatment may, therefore, discourage clients from receiving adequate and appropriate therapy. Some staff recalled clients not continuing for treatment due to the costs. Although the figure of 220 Kshs is high from the clients' perspective, it is not enough to recover the cost to the MCS of providing the service (which is on average 451 Kshs (US\$ 8.2)). This presents a dilemma for the MCS as there is a limit beyond which clients cannot pay.

Cost of providing MCH-FP and STI services to the MCS: The MCS is currently spending more money to provide the various services than it charges the clients. The average cost of providing family planning services to a new client at the MCS clinics is 224.20 Kshs (US\$4.08), and 98.1 Kshs (1.8US\$) through the community-based distribution program. This is largely because at both MCS clinics, the doctors are actively involved in the provision of family planning services,

15 A more detailed discussion of the cost analysis of integrating STI/HIV services into MCH-FP services will be provided in a monograph which reviews a number of cost analyses undertaken. The monograph will discuss the methodology used including assumptions and strengths and weaknesses of the costing analysis. This current section should be seen as a first step in beginning to untangle the complexities of assessing costs. The monograph is being prepared jointly by REDSO, The Population Council and Pathfinder International.

while in the CBD program it is only the CSWs and one nurse. The cost of providing family planning services at the clinic varies by method, from 96.23 Kshs (1.8 US\$) for condoms to 1,027.63 Kshs (19.5 US\$) for tubal ligation. The involvement of doctors in the provision of family planning services greatly increases the unit cost for this service. Curative and other MCH (antenatal, postnatal, child welfare) services cost on average 69.61 Kshs (US\$1.3) and 151.63 (US\$2.8) respectively.

Treatment for STIs is the most expensive service provided at both MCS clinics. It costs the MCS on average 451.0 Kshs (US\$8.2) to treat a client who presents with urethral/vaginal discharge and has no other health needs. These costs included staff time, laboratory tests, drugs, other consumables and overhead costs. When STI services are provided separately, the client is treated as though they came for a curative service and must be seen by the doctor. On average, the doctor spends 35 minutes to provide STI services to a client in the curative department at a staff cost of 225.5Kshs (US\$ 4.1). The costs are also increased due to the need for laboratory testing before prescribing the drugs required to treat the STIs. The MCS spent on average 55.9Kshs (US\$ 1.0) on laboratory tests for each client treated for STIs in 1994. Drugs and other consumables cost 80.1Kshs (US\$ 1.5) and 38.6 Kshs (US\$ 0.7) respectively per client treated for STIs. The rest of the costs 50.5 Kshs (US\$ 1.0) were for overheads which included administrative costs, transport, rents etc. These data show that staff time alone accounts for 50% of the cost for treating STIs by the Mkomani

Clinic Society.

Figure 13 shows that providing an integrated service to a new family planning client choosing to use the pill who also has an STI would cost the MCS an average of 470.90 Kshs (US\$8.6). The cost is increased due to the additional laboratory tests, and the drugs required to manage the STI component. Laboratory testing is required for most STI clients before a diagnosis is made. This requirement adds an extra cost to the total for the service. The drugs used to treat STIs at the MCS clinics are expensive and account for up to 17% of the overall cost of providing both family planning and STI services using the integrated approach.

The cost of providing family planning and STI services using an integrated approach is lower when compared to the cost of providing these same services separately to a new client choosing to use the pill. It would cost a total of 681.6 Kshs (US\$12.4) if the services were provided separately compared to 470.9 Kshs (US\$8.6) if an integrated approach is used (Figure 13). The lower costs are due to savings in the staff costs, supplies (e.g., gloves, antiseptic lotions and gauze/cotton wool) required for pelvic examinations and the overhead costs. The current MCS policy allows only doctors to prescribe the drugs required to treat STIs. The doctors spend an estimated five minutes to prescribe medications to clients whom the nurses have already

assessed. These doctors usually rely on the nurses' assessments to prescribe the medications for the clients. Nurses interviewed said that they would require 35 minutes to provide STI services to a new family planning client choosing to use the pill and who has a vaginal discharge. This represents an increase of 15 minutes above the time the nurse would have spent providing only family planning services to such a client. Although the time the nurses spend with the client is increased by 15 minutes, the overall staff cost is lower than when the family planning and STI services are provided separately. The combined nurses' and doctors' time required to provide services to a new family planning client who also has an STI would cost 199.6KShs (US\$ 3.6) to the MCS compared to 321.2 Kshs (US\$ 5.8) when these services are provided separately.

The other area in which a saving is realized is in the overhead costs. When the services are provided separately, the sum of the overhead costs would be 147.0 Kshs (US\$ 2.7) compared to 96.7 Kshs (US\$1.8) if the services are provided using the integrated approach. Similar examination procedures including a pelvic assessment are required for a new FP client and a client with STIs. This will reduce the amount of consumables (gloves, antiseptic lotions, cotton wool etc.) required for assessing the clients by one half as examination procedures will be carried out once rather than twice, thus reducing further the cost of providing STI services when the integrated approach is used.

Recommendations and Actions Taken

The MCS, a private non profit making organization continues to play a key role in the provision of health care including reproductive health services to men and women in the low income groups within Mombasa Municipality. Recently, the MCS adapted the integrated approach to provide MCH, FP, STI and HIV/AIDS services within their clinics. In the past two years, several activities including staff training and raising awareness on STIs and HIV/AIDS have been undertaken. While progress has been achieved in many aspects of the program, some areas need further improvement to facilitate the integration process. In fact, it is clear that considerable work needs to be accomplished in many areas before a smooth process is in place and functioning well. The case study helped the MCS management to identify areas within their program that needed improvement and some possible interventions.

The case study found that the staff needed training on the differences between screening and the syndromic approach to diagnosis and treatment of STIs. The service providers also required help to overcome their own beliefs and fears that influenced their practices. The clinic staff's concerns about the clients' sensitivities were not born out by the available data and findings from this case study. It was found that there was no standardized approach to the provision of MCH, FP, STI and HIV/AIDS service using the integrated approach. This was so although all the staff had attended in-house seminars on the provision of these services using this approach. It was therefore recommended that a service providers' instruction manual be developed to address these issues.

The MCS management, with technical assistance from Pathfinder International, has since developed a service provider's instruction manual covering history taking, examination, IEC, counseling, treatment and infection control procedures to be used by the MCS staff. The manual was introduced to the staff through in-house training workshops organized by the MCS management with assistance from Pathfinder International. Since then, the manual has been used as the main reference material during the training of staff on the integration of MCH, FP, STI and HIV/AIDS services. The contents of the manual have been used to develop checklists for monitoring and supervision of the quality of MCH, FP, STI, and HIV/AIDS services provided to clients.

The study also showed that raising public awareness about the availability of STI services and HIV/AIDS services needed more emphasis by the MCS. The MCS management needs to give the same importance to informing the community about the availability of STI and HIV/AIDS services as it attaches to its MCH and FP services. This will mean some reorientation of the staff, especially the CSWs. The performance of the CSWs is currently determined only by the number of FP clients recruited and/or referred to the clinic, although they have been trained in some aspects of STI/HIV services. The inclusion of these services when assessing the CSWs' performance may encourage them to give equal importance to counseling and referral for STIs and HIV/AIDS during their routine activities.

The CSWs are now required to report on the STI and HIV/AIDS services they provide to the community. The CSWs report on the number of individuals to whom they provided information and counseling on STIs and HIV/AIDS through home visits and public gatherings.

They are also expected to report on the clients they refer to the clinics for STI and/or HIV/AIDS services. According to the Director of the MCS, this has led to an increase in the number of clients receiving STI and HIV/AIDS services from the CSWs and an improvement in the quality of the service provided.

Although the MCS has basic laboratory facilities, the cost of the tests themselves might be limiting access for some clients to these services. The use of laboratory technologists to collect specimens compromises clients' privacy, leads to a wastage of scarce supplies, and has not improved the quality of service provided to the clients. Based on this information, the MCS management felt that it should review the current laboratory operations and develop strategies that will make this service more cost-effective. For example, training the MCH-FP nurses in specimen collection and making the required equipment and supplies available within the examination rooms would be one way of reducing these costs.

The practice of using laboratory technologists to take specimens requiring exposure and manipulation of the genital tract was changed, and now the nurses providing MCH/FP services collect those specimens. All the necessary equipment and supplies required for specimen collection are now available in the rooms where MCH/FP services are provided. No training was required for the nurses as they already had the necessary skills. The nurses providing MCH/FP services have observed that fewer clients are now refusing to have these specimens taken than before the change in practice.

At the Bomu MCS clinic, clients receiving MCH and FP services had to visit two different rooms separated by a waiting area for IEC, counseling and examination. If an MCH/FP client required a doctor's review, she had to go to the curative department where all the doctors' consultation rooms were. The curative department is difficult to access from the MCH/FP unit. The MCH/FP client would have to exit the main building and use another entrance located some distance from the MCH/FP unit. These movements compromised clients' privacy and increased the time clients spent at the clinics to receive services.

The MCS management has since reviewed the use of the available space within their clinics and made changes to improve on utilization and client flow. The MCH/FP clients now do not have to go to different rooms for examination and counseling at both clinics. A doctor's consultation room was created within the MCH/FP unit thus reducing the distance MCH/FP clients have to travel within the facility for consultations. These changes have reduced the overcrowding in the waiting areas and enhanced clients' privacy besides reducing clients' waiting time at the clinics.

Although the nurses take the history, examine, request the laboratory tests and make the diagnosis for clients with symptoms suggesting STIs, they have to refer the clients to a doctor for prescribing the medications. There is still the need to allow and facilitate the clinic nurses to prescribe basic medications for STIs. This will reduce the time clients have to spend waiting to see the doctors and increase the confidence clients have in the clinic nurses. This change in policy would also reduce the costs of providing STI services by reducing the amount of doctors' time currently required.

Currently, the MCS is spending more money to provide services to clients than it is collecting through the cost recovery program. As a result, the MCS has to rely on other sources

of funding to sustain its activities. These sources include grants from USAID and other fund raising activities by the board of management. The MCS has to find ways of reducing their operating costs and/or find more sustainable sources of income to run its operations. One way is to consolidate the use of the integrated approach to provide family planning and STI services which has been shown to result in a net saving within the MCS clinics. Nevertheless, "savings" through providing an integrated approach will not by itself, resolve the problem.

The case study showed that the cost recovery and sustainability activities by the MCS were not well developed. These finding have encouraged the MCS management to pursue these activities more aggressively. They are exploring ways of broadening their resource base and improving on their cost recovery activities. The case study identified commercialization of their laboratory services as one step they could embark on immediately. The MCS management has already undertaken study tours to programs in the country that provide laboratory services for a fee to study their procedures and performance.

The MCS has clearly taken an innovative and major step forward by institutionalizing the use of an integrated approach in providing MCH-FP and STI/HIV services. The process has been in place for only three years and more needs to be done to make it fully functional. However, the experience presented here suggests that the approach clearly has the potential for improving the cost-effectiveness of service delivery at the MCS clinics, and for encouraging clients and staff to consider STI symptoms and management when interacting for MCH or FP services.

Concluding Observations

It is true that there is a considerable amount of work to be done in many MCS program areas before a smooth process for providing integrated services is firmly in place. Nevertheless, its experiences provide valuable guidelines for all program managers thinking about initiating integrated services or already in the process of developing those services. Some of the more pertinent observations to be made about MCS's experiences are grouped below under training, implementation and sustainability.

Training

Most of the services providers in the MCH-FP units were trained at a time when some STI and HIV/AIDS were not yet identified. The management of STIs and HIV/AIDS has changed over the years and will continue to do so as our knowledge about them advances. Therefore;

- Skills of service providers need to be updated regularly.
- The training curricula have to be adapted to the local situations and the integration model to be used by the trainees.

Although MCS has undertaken impressive efforts at cost-saving in-house training, it is clear that;

- There is a major need to address the personal attitudes, beliefs and existing practices, since these shape the application of any new skills in which staff are trained.

Service providers at MCS are being trained in the use of the syndromic approach to treat and diagnose STIs.

- The sensitivity and specificity of the syndromic approach are improved if risk scores are included in the decision making process. The difference between risk assessment and diagnosis is not clear to the service providers and therefore needs to be emphasized in training.
- It is also clear that MCS, and perhaps at all delivery sites with easily accessible laboratory facilities, service providers continue to rely on the laboratory for diagnosis and deciding treatment for STIs. This is so despite the training in the syndromic approach offered to the service providers. This raises two interesting questions for clinic sites where laboratory facilities are easily available;
 - 1) Although following the syndromic approach is much less expensive than laboratory procedures, it is much less precise, so should the syndromic approach even be taught?

- 2) If a laboratory is on site and laboratory services are one of the ways costs are being recouped, might it be problematic to change to the less expensive syndromic approach?

Implementation

Service providers at MCS like most programs in Sub-Saharan Africa have to serve many clients on any clinic day. Due to shortages of staff, the same service providers are often called upon to provide many different types of services in a single clinic session. This makes it difficult for them to remember everything they were taught when providing services in such busy and changing situations.

- This problem can be addressed through the provision of service provider guidelines and checklists that the service provider can readily refer to.

In urban areas where populations are very mobile tracing contacts is difficult. Polygamous unions present us with a unique situation when carrying out contact tracing and in communities where premarital and extramarital sex is not allowed contact tracing will even be more difficult.

- Contact tracing at MCS and in almost all other integration efforts that have been reported continues to be a major problem.

Developing self sustaining programs in sub-Saharan Africa, realistically lies in the future. The MCS spends much more money to provide the different services than it can recover. For example, the MCS spends US\$8.2 to provide STI service yet the client pays only US\$ 4-5. The MCS has found it difficult to raise the fees beyond this as many clients will not afford even the US\$ 4-5. The difference has to be raised from other sources like donors.

- More attention to cost and cost effectiveness will undoubtedly assist programs in the region.
- Using nurses to diagnose and prescribe medications for STIs at MCS makes a great amount of sense and will be more cost effective.
- Programs that are currently running vertical MCH-FP and STI programs can be more cost effective (based on the initial data from MCS) through integrating these services.

However, it is clear that donor support and creative community support strategies are essential as programs move toward sustainability.

The case of MCS is very instructive. Even with all its capacity, highly trained staff and commitment of the top management, moving from separate MCH-FP and STI/HIV services to integrated services has not been an easy task for the MCS. The attempts that the MCS have made, the problems that have resulted, present attempts to resolve those problems and how well the solutions work become critical information for the service delivery efforts throughout out sub-Saharan Africa.

