Background
It has been a decade since the end of the civil war in Mozambique and some basic health indicators appear to have improved while others have grown worse in this time period. The nation is vast in size and access to health services remains a challenge, especially in pockets of the country where the terrain makes transportation treacherous and vehicles are in short supply. Because of the population distribution in rural areas, the often fractured health care infrastructure in some provinces and the underlying poverty, many obstacles remain to providing access to basic health care for a large percentage of Mozambicans.

Despite these challenges, however, there are some noteworthy achievements as well as some obvious needs. The percentage of the population with access to health care grew 10 per cent between 1992 and 1999; thirty-five percent of the population is considered to have access to quality health care. The percentage of individuals characterized as “new family planning clients” has grown from 2.3 per cent in 1996 to 7.2 per cent in 2000, yet the modern contraceptive prevalence rate remains low at 5 per cent, and only 60 per cent of women have knowledge of at least one method of family planning.

The total fertility rate is 5.86, with the majority of women giving birth at least once by the time they reach 20. Approximately 44 per cent of deliveries happen within institutions (far more in Maputo city than elsewhere), but the maternal mortality ratio and number of neonatal deaths within institutions is high, undoubtedly due to a number of factors: delays in getting to a facility, delays in referrals being made in a timely manner, overburdened staff within facilities, inadequate equipment within facilities, etc. Within institutions, the maternal mortality ratio is believed to vary between 175 and 600 per 100,000 live births, against a national average (including women giving birth in and outside of institutions) of approximately 980 maternal deaths per 100,000 live births.

For each maternal death, there are 17 reported stillbirths. Data from 1997 to 2002 suggest that out of every 100 stillbirths reported within an institution, 10 women were admitted to the hospital with a detectable foetal heartbeat. This fact, as well as a national C-section rate of 1.12 per cent, signals a need for further work on the quality of facility-based maternal care. Rates of antenatal coverage are believed to be fairly high in most provinces and have grown in the last 10 years. Not as encouraging is the fact that the vast majority of women who seek antenatal care do not begin doing so until their sixth month of pregnancy.

As is true throughout the region, HIV/AIDS is already having far-reaching consequences and is expected to reduce average life expectancy considerably in the next 10 years if the incidence rate continues at the current pace. Prevalence of AIDS is currently thought to be a little more than 12 per cent among pregnant women, with women of all ages representing 52 per cent of new AIDS cases in 2001. Life expectancy among women is currently 38.6; among men, it is 37.3.

Despite grinding poverty evident throughout most of the country—Mozambique remains one of the 10 poorest countries in the world according to the United Nations Development Programme’s (UNDP) Human Development Report—the significance of peace prevailing this past decade cannot be overestimated. More than anything else, “that we can now expect to live,” explained a man in Quelimane, “fills us with light.” Ensuring that that expectation is met for everyone, including women with obstetric emergencies, remains a formidable challenge.

Issues and Challenges
In Mozambique, the needs assessment team met with the UNFPA country office staff, the Vice Minister of Health and the Deputy Director of the Community Health Department within the MOH.
In addition, in the province of Zambezia, the team met with the Provincial Director of Health and the director of the hospital as well as the surgeon providing fistula repair services at Hospital Provincial de Quelimane in Quelimane. The team also had the opportunity to visit with six fistula clients in Quelimane, five of whom had been repaired and were receiving post-operative care and one of whom was waiting for her procedure. In Maputo, the team met with the urologist providing fistula repair services at Maputo Central Hospital, had the opportunity to observe a repair within the operating theatre and met with other physicians assisting in the operating theatre.

Although Mozambique is large, there are only three physicians known to have the skills who are actually providing fistula repairs throughout the whole country: a Mozambican urologist in the southern part of the country at Maputo Central Hospital, an Italian general surgeon in central Mozambique in Quelimane and a Tanzanian OB/GYN in Niassa province in the north. The annual caseload varies by facility—ranging from 15 in the northernmost facility to greater than 50 elsewhere—but each provider interviewed agreed that the numbers of women they were seeing undoubtedly represent the tip of the iceberg. In addition to a considerable caseload at each of these three sites, each of the physicians goes out to perform fistula repairs at other sites, but there is concern among them about their ability to maintain this practice and the lack of other providers who might be interested in learning these skills and providing repairs. Two of the doctors went together to one province to perform 27 operations in three weeks. While this effort helped diminish the growing backlog, it is “not the smartest nor the most sustainable way to go, if we cannot be training others while operating,” noted one of the providers.

The fistula clients appear to face great stigma in their communities and their families. In central Mozambique, a woman with a fistula may become the servant of the next woman whom her husband takes as a wife and remain in this position for as long as she is leaking. If she is able to be successfully repaired, her chances increase either of going back to her husband as his wife or finding another husband. In either scenario, however, there will be strong pressure on her to become pregnant and, for safety reasons, the provider will have counselled her on the need to deliver the next (and all subsequent babies) within a facility. Indeed, the surgeon in Quelimane has done hundreds of C-sections on women whom he has previously repaired.

The stigmatizing of girls and women appears to spread beyond their families and communities. All three of the physicians currently performing fistula repairs have offered to train others, notably OB/GYNs, but there has been little interest shown. The two providers interviewed noted that stigma is probably one reason, coupled with others. In fact, as part of their training, each student has a three-month rotation during which s/he is taught how to perform fistula repair, but none to date has wanted to continue learning these skills. The urologist in Maputo recently spent three months in additional training on another issue in Cape Town and, although his fellow providers within Maputo Central Hospital have the skills to do at least simple fistula repairs, they only performed one while he was away and waited for him to return to take on the others, even though they were not all complicated cases. In Quelimane, the provider who does repairs offered to train the physicians who were there with him for three years, but none was interested. The OB/GYN Department requested that fistula clients leave the maternity ward, so now women with fistula must use the surgery ward for pre- and post-operative care.

Because of strong pressure to have a baby, it appears that counselling on family planning and HIV/AIDS is virtually nonexistent for fistula clients. Among the providers interviewed, the risk of contracting HIV/AIDS was considered secondary to a woman’s need to become pregnant again. Indeed, because there is such an emphasis on women having many children, there is currently a family planning campaign aimed at men in
Mozambique. The perception of women who go to family planning clinics is that they “have more than one man” or else they would not need such services, so women who do practice family planning tend to do so secretly, going to the clinic under the guise of needing a consultation on a baby’s health. Probably because injectables can be practiced discreetly, these methods are the most popular choice.

As in other countries, the transportation and communication system are often insufficient to get a woman experiencing obstructed labour to a facility quickly. Especially in the northern part of the country where the terrain is mountainous, wheelbarrows, ox carts and bicycles have not met with success. Also in this part of the country, women tend to be very small and fistula appears to be more widespread than in other locations where women are of larger stature. For these reasons, in some places, waiting homes are being established as a mechanism to get women at high risk closer to facilities before giving birth. While the policy is normally to ask women to come in at eight months to “wait” for a month, it is rare that women will do so, as their families often do not want them to be away from home for so long and they are often reluctant to leave their children for this period of time.

Recommendations and Critical Needs

• Maintain waiting homes as part—but not all—of the answer.
As noted, there has been some success with establishing waiting homes for women who are considered high risk, perhaps because of an earlier fistula and repair or for other reasons. Although the concept of the “high risk” label is controversial and a woman’s family may not want to allow her to be “waiting” for labour to ensue at a location other than her own home, waiting homes have met with some success in limited parts of the country.

• Develop an incentive system for physicians to interest them in learning fistula repair and keep them motivated to provide services.
One key concern has been the lack of interest in learning the skills to provide fistula repair, despite mandatory training as part of medical education within the country. For this reason, a variety of types of incentives (travel to international reproductive health conferences was suggested by some staff) needs to be provided to attract and maintain potential providers’ interest.

• Secure short-term external support as the national government continues rebuilding the health care infrastructure.
Mozambique has done a tremendous job restoring the health care infrastructure following the war, yet there is a long way still to go. For fistula repair to be “truly owned by Mozambicans”, in the words of one provider, the MOH needs to take over some kind of fistula initiative, following support of an outside donor for a limited period of time, such as three years.

• Advocate for the government to describe fistula as a human rights issue.
To build awareness about the issue, a campaign needs to be created that targets potential clients and potential providers (as well as other key stakeholders) with a message that posits a life free of fistula as a human rights issue. The MOH could play a key role in the creation of such a campaign.

• Establish one or two training centres for repair of more complicated cases.
Because the country is so large, it may be that more than one training centre is required to serve as a national referral centre. Such centre(s) would need a steady supply of support, equipment and materials. While Maputo Central Hospital might be the obvious candidate, the distance between Maputo and other parts of the country may suggest the need to establish another one as well. Providers note that a master plan should be created at a national level which outlines what level of facilities are able to provide what level and kinds of fistula repairs. This assessment process could also drive the selection of a national centre or centres.
A. Hospital Provincial de Quelimane, Quelimane, visited 13 August 2002

Size: 420 beds, one operating theatre with three rooms. The maternity ward has 60 beds, but fistula clients have been asked to leave the maternity ward (due to the smell) and are now housed in the surgery ward.

Medical staff: 11 doctors, three surgery technicians, 16 nurses (in maternity ward only; more in the rest of the hospital).

Caseload: 200+ deliveries each month, of which 25 to 30 are C-sections. Per year, 40 to 50 fistula clients, but there is a backlog. Six cases were waiting on the day the team visited. Dr. Aldo Marchesini also goes out to five other provincial hospitals to operate. All these facilities have gynaecologists, none of whom have taken the opportunity to be trained.

Provenance of clients: Clients come from throughout Zambezia. There is a group called the Lilongwe tribe in the north where women are typically of very small stature (1m 50cm); among these women, there is a high prevalence of fistula. In addition, some clients are sent from other provinces: Nampula, Niassa and Capo Delgado.

Typical client profile: Fistula clients are generally younger than 20, but some women are 30, 35 or 40 and have been living with fistula for 15 years. Of the six fistula clients interviewed by the research team, only two developed fistula with their first pregnancy; for the others, parity was three to eight.

Assessment and screening process:
• A manual exam is performed to determine if the woman’s condition is fistula. This is “adequate” for about 70 per cent.
• For the remaining 30 per cent, a surgeon needs to examine the client in an operating theatre to determine the position and size of fistula, as well as its degree of complication. Some of these exams are performed with anaesthesia, some without.
• Screening for anaemia.
• If indicated, screening for renal function.
• Since 85 per cent of population has schistosomiasis, every client is given single dose of praziquantel.
• Time since delivery is determined—it must be two to three months. If a woman is from far away, she is admitted and waits at the hospital. If the waiting period is one month or less, a client is admitted. Otherwise, Dr. Marchesini gives her funds to return home and then tells her to return a week before the surgery. On average, 35 per cent don’t come back at all. The other 65 per cent, may come back, but later than the appointment date.

Post-operative care:
• Clients usually stay for 14 days, until catheter comes out.
• Counselling on coming back to hospital to deliver in the future by elective C-section, so Dr. Marchesini has done many C-sections on former fistula clients.
• Counselling on abstaining for two months.
• No specific counselling on family planning or HIV. The sense among providers is that these women really want to get pregnant, so it is not necessary. “HIV is a secondary problem.”

Rehabilitation/reintegration: No specific programmes; more than half of the women are abandoned by their husbands. Sometimes, the wife with fistula becomes the servant for the next wife whom the husband takes. If repair is successful, she may be taken back as an equivalent wife or may marry someone else

Community outreach: No programmes doing community outreach to which fistula is linked. There is outreach, however, on family planning, immunization, etc.

Support at the policy level: MOH is aware of the problem with fistula, as are people at the provincial level, but nothing specific is being done, except mention is made of fistula in the context of general maternal health care policy for both adolescent sexual and reproductive health and general reproductive health.
Estimated fully-loaded cost per procedure: Not known, but fistula clients themselves do not pay if they satisfy a certain number of criteria. Obstetric services are free, services are free to those under 18 and older than 60 and transfers from districts are treated free of charge.

Resources:
- Dr. Marchesini’s friends in Italy provide materials, such as suture. They gave head lamps to two other doctors.
- The Government of Mozambique provides the only other support that the hospital gets.

Barriers:
- Due to gender and economic inequities, women with fistula don’t have money, power, etc. and might not know services are available.
- Fistula is not recognized at the low-level health facilities.
- Sometimes fistulas are recognized, but are not considered important enough problems to refer.
- Transportation—road network, distances to travel and difficult terrain—make it hard for women to access services.
- Space for fistula clients pre-op and post-op is limited. Dr. Marchesini bought 14 mattresses and 10 mats for surgery ward so clients could also stay on the floor.
- Only one provider can do repairs at the facility, which contributes to the growth of a backlog of cases. A system as well as resources need to be in place to sustain supplies and materials.

B. Maputo Central Hospital, Maputo, visited 14 August 2002

Size: 1,200 beds, only 800 of which are in use because of staff, especially nurse, shortages. There are theatre blocks in the maternity unit, casualty department and general surgery department. The general surgery department has the largest theatre block, with five operating rooms. However, one of the rooms is not in use due to staff shortages, while the other theatres sometimes have two different clients under spinal anaesthesia being operated on in the same room simultaneously. The urology team is looking for funding to be able to renovate a theatre and ward for special use by fistula clients. Some physical exams are performed in the Urology Outpatient Department, in addition to some minor prostate and hydrocele surgery.

Medical staff: The urology team consists of a surgeon, a urologist, an anaesthetist and an OB/GYN resident.

Caseload: The urology team performs an average of two repairs a week, and they are already booked to the end of the year. A much smaller number of simpler procedures, one or two a month, is performed in the maternity theatres. The urology team intends to visit regional hospitals to conduct on-the-job training and to set up model fistula repair teams.

Provenance of clients: As this hospital serves as the country’s main referral and teaching hospital, clients come from all over Mozambique, although the ones near the Malawi border tend to cross over into Malawi. Many of the clients referred have complications requiring very skilled surgery and equipment in addition to basic fistula repair supplies and materials.

Typical client profile: Fistula clients are generally young, sometimes just out of their teens, poor and of short stature. They usually developed the fistula with the first pregnancy. A few have had other pregnancies before and some, like the woman the team saw in the theatre, are in their late 20s and have undergone previous attempts at fistula repair.

Assessment and screening:
- Most repair procedures are performed at least three months after the pregnancy during which the woman experienced fistula.
- Repairs are preceded by examination in the ward and also under anaesthesia pre-op.
- Renal function tests are performed as indicated, but the urography unit is non-functional at present.
- Routine praziquantel is given pre-op for endemic schistosomiasis.
- Ureteric catheterization is used for some complicated types of fistulas.
Post-operative care:
• Clients usually have in-dwelling bladder catheter for 14 days. No bladder training.
• Clients are advised to abstain and to avoid tampons and other foreign objects in the vagina for three months.
• Clients are advised that a C-section is mandatory for next pregnancy.
• Family planning needs and HIV risk are not routinely explored; these are perceived to be more of an OB/GYN responsibility.

Rehabilitation/reintegration: No specific programmes or follow-up in the community. Most fistula repairs are successful at the first attempt, but some have required as many as six attempts, and a couple have required sophisticated surgery, such as the recreation of a bladder out of intestinal tissue or the creation of a new vagina or urinary diversion. A few of the women are known to have come back for C-sections, but most would be seen in the maternity unit or in peripheral hospitals. It is not known how well the clients are later integrated into the community.

Community outreach: There is none related to fistula work, except for the proposed fistula model team visits to peripheral sites.

Support at the policy level: The MOH is committed to the general issues of safe motherhood, including fistula, but is severely hampered by lack of funds, not only for infrastructure, equipment and materials, but also for salaries. The urologist has to use his personal cystoscope and vicryl sutures for the MOH clients.

Estimated cost per procedure: This has not been estimated. Fistula clients do not pay.

Resources: The MOH supports the hospital. The urologist often uses some of his personal materials for clients.

Barriers:
• Lack of equipment and supplies. Due to the complexity of the type of surgery required for some of the referral cases, the hospital needs a couple of cystoscopes with three spare lenses each, a ring vaginal retractor to avoid the need for many assistant hands in the surgical field, expandables such as vicryl/ureteric catheters and a Liga-Sure set for easier control of bleeding during complex surgery.
• Disempowerment of women with fistula, economically and socially.
• Staff shortages. Nurses are poorly paid, about $100 USD per month, and many have left and gone on to better paid non-medical work, including small business enterprise and horticulture. Doctors are paid about $300 USD per month, so many of them also have a private practice.
• Poor infrastructure.
• Lack of interest/motivation of many of the local doctors, including OB/GYNs in fistula work. One OB/GYN resident was in the theatre as part of the repair team. He admitted that he was not really interested in this work and was only taking this rotation to fulfill a requirement for qualification.

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