Reproductive health in Mali is characterized by a total fertility rate of 7 and a modern contraceptive prevalence rate of 6 per cent,” although 23 per cent of women surveyed between 1996 and 2001 reported that they had used a method of contraception at some point in their life.” Another challenge to reproductive health in Mali is HIV. In addition, the maternal mortality ratio remains high despite a decrease in infant mortality over the past two decades.

Increased antenatal care attendance during the last five years resulted in almost half of all pregnant women receiving some kind of antenatal care.

Sixty-three percent of women deliver at home, in part because health facilities are hard to reach. For 85 per cent of women living in rural areas, the nearest hospital is located at least 30 km away. When women are educated—and only 38 per cent of women in Mali have had the opportunity to receive formal education—they tend to live in urban areas and to deliver in health care facilities, the majority of which are found there. In contrast, 66 per cent of the women who deliver at home have no education at all. The circumstances surrounding labour and delivery differ radically depending on location: 91 per cent of women in Bamako, the capital city, give birth in a facility; many of these women report having had the chance to make the decision themselves. Outside of Bamako, critical decisions about a birth are often made by a prominent family member.

These conditions imply that many women are at risk for fistula in Mali and it is, indeed, recognized as a problem in the country, with both local and international groups working to find solutions. Part of the issue is connected to discovering how many women have fistulas. A recent survey sponsored by Doctors of the World and conducted near Mopti suggests that out of 2,000 villages in the region, half have at least one woman living with fistula. No other surveys have been conducted to determine the number of cases existing nationwide, but based on information gathered by Doctors of the World, it is clear that the number of cases surfacing for treatment does not mirror the actual prevalence of the condition. Furthermore, because families often want to hide members with fistula, this finding is likely to represent an undercount. In addition, it appears that those with the condition are, in general, young. At one facility providing fistula repair, the average age of a fistula client is 15; at the other, it is 25. As elsewhere in the region, women who develop fistula tend to be poor, uneducated and often have neither support from their families nor ready access to a facility that might offer high quality labour and delivery care.

Doctors of the World first organized missions to Mali to repair obstetric fistula in 1986. In November 1993, the first fistula programme was launched in Mopti with the help of Dr. Ouattara at the University Hospital of Point G in Bamako. The primary objective was to increase the number of service delivery sites outside the capital city, making fistula repair more readily available to women who could not reach Bamako. Until 2000, the programme was entirely funded by Doctors of the World, but supporters now include several other partners. Sixty-five percent of the current project, which will be completed in December 2003, is underwritten by private organizations. This project covers 90 per cent of the cost of each fistula repair, with clients contributing about $25 USD. Another facet of fistula care has been taken up by Delta Survie, a local NGO that collaborates with Doctors of the World. This group has initiated a project at the Regional Hospital of Mopti, Sominé Dolo, to improve the living conditions of women with fistula who have either received or are awaiting treatment at the facility. Efforts include building a shed on the hospital grounds where women can learn handicrafts that might allow them to earn an income.
Issues and Challenges

The needs assessment team had the opportunity to participate in a two-day meeting that assembled several Malian health providers from around the country, all of whom are involved in fistula treatment and its accompanying social problems. The meeting, known as Journée des Femmes Fistuleuses de Mopti or the Day of Fistula in Mopti, was convened by Doctors of the World. At the meeting, the team was able to speak with members of Doctors of the World, the Ministry of Social Action and Delta Survie. In Bamako, the team also met with staff from the University Hospital of Point G in Bamako and the Director of the Reproductive Health Division of the MOH.

Visits to two sites in Mali and discussions with providers indicated that there is a stark need for more local surgeons able to provide repair services. The only local doctors known to perform fistula surgery are concentrated in Bamako, at Point G. At that facility there are four urologists who all perform fistula surgery, but given that only one operating room is available for the entire hospital, it is very difficult to meet the demand: urology emergencies and other urgent operations take precedence over fistula repair. There is heavy reliance on visiting expatriate physicians. In addition, the hospital of Mopti depends entirely on external support to carry out fistula repair. Their current programme, which ends in December 2003, will be capable of extending their efforts through to the next phase only if further resources are secured.

Another issue Malians face is the fact that the majority of clinically trained midwives practice in Bamako. While this fact encourages many women there to deliver in a facility, as noted above, it also means that access to emergency obstetric care in rural areas is very difficult to locate. Women in these regions are already more likely to give birth at home, but the lack of health care resources near their communities contributes to their not seeking care, even if they experience a difficult labour.

Further complicating the situation for women in these areas is that fact that mothers-in-law and other important family members are in charge of decisions about where a woman may give birth and what to do if the labour does not proceed as hoped. These relatives may not be aware of the morbidities possible from obstructed labour or know where to go to obtain care. In addition, community health centres, which are often understaffed and underequipped, tend to be the facilities that women seek, causing further critical delays during emergencies.

If a woman does develop fistula, she may suffer from stigmatization and be vulnerable to social exclusion. Relatives often try to hide the presence of a family member with fistula, and often do not have the benefit of knowing what has caused the fistula in the first place. The affected women are often ashamed of their condition and isolate themselves, trying to hide from the community at large.

No reproductive health programme that includes fistula repair is now in place at the national level. However, a new five-year plan includes mention of general reproductive health concerns and those of young adults in particular.

Recommendations

• Advocate at the national level for increased attention to fistula as a key reproductive health concern.
Although some scattered support for the issue exists at the policy level, a strategic advocacy programme must be mounted to build commitment to the issue within Mali. Increased attention to reproductive health issues is the first step. Only with this commitment will policy makers be able to build a better platform from which to provide support for fistula repair.

• Develop community-level awareness-raising campaigns.
A widespread campaign to raise awareness about and explain fistula—both its causes and its treatment—among women and the key decision makers
in their lives would help to spread the word that the condition is both preventable and treatable. Doctors of the World has sponsored a play about the issue which has garnered significant attention in places where it has been performed; such efforts need to be continued and reinforced with other locally appropriate media, taking into account high rates of illiteracy.

- **Train additional providers and ensure skilled surgeons and providers are using best practices across the country.**
  As part of their academic training, physicians must learn how to conduct fistula repairs. At least a handful of doctors at referral centres in different regions of the country need to learn the necessary skills to perform this type of surgery. In particular, it is important that a local surgeon in Mopti gets trained as a way to provide continuity if the external support diminishes. Another key piece of training involves the creation of an evidence-based protocol for repairs. This kind of training needs to be made available in medical training programmes across the country. Best practices may also extend to those providing antenatal care, which a large number of women in Mali seek. Providers could use these visits to offer women and their families information on fistula prevention and the importance of emergency obstetric care.

- **Increase collaboration between institutions providing repairs and improve communication with providers in other areas and countries.**
  It is important to increase the communication between the two centres offering repairs, so that they can coordinate and, ideally, maximize the efficiency of their treatment plans. In addition, surgeons in Mali would welcome increased communication and exchanges with international colleagues to improve their technical skills and to learn new ones.

- **Create a social reintegration strategy for women following repair.**
  Careful attention needs to be paid to how women reintegrate into society following fistula surgery. The Oasis at Point G has started to address these issues, but it could use assistance. Other models for re-integration also need to be developed to create an environment in Mali that actively encourages and supports women’s re-entry into communities.

- **Devise a fund or financial strategy to support women who need repairs.**
  A critical obstacle to women seeking care in Mali is the need to provide even partial payment for fistula repairs. As is common in the other countries where the needs assessment took place, fistula clients in Mali have no means to pay. Some kind of financial support will be necessary if repairs are to be offered to the current roster of clients. Local NGOs such as Bengadi have made attempts to provide this type of support at the Hospital of Point G by assuming transportation costs and subsidizing part of the operation for women in the town of Bla.

- **Consider creating a national fistula centre at University Hospital of Point G.**
  This facility is able to perform hundreds of fistula operations each year. The 80–85 per cent success rate is evidence that the providers are technically skilled, but staff have reported that the number of repairs they perform does not reflect what they could be doing. With improved infrastructure, it would be possible for providers to dedicate more time to fistula repair and to offer higher quality care. Furthermore, no collaboration between the hospital and the Oasis centre is currently in place; but with improved partnership, the centre could help handle an increased number of fistula clients and keep the hospital at full capacity.
Size: Six out of 100 beds are reserved for fistula clients; two operating theatres, one of which has recently been remodelled by Doctors of the World and Doctors Without Borders.

Medical staff: Four missions per year come to Sominé Dolo with Doctors of the World. Each mission consists of several doctors from a pool of about 20, including Dr. Jean-Martin Zino, an expatriate physician with Doctors of the World based in Mopti. There are currently no local surgeons available to operate on fistula and only one general surgeon slated to serve the entire region of Mopti, with its 1,400,000 residents. Given this situation, it is understandable that this physician has many other responsibilities apart from fistula repair.

Caseload: 150 operations per year since the 2000 project began, with at least a 78 per cent success rate. This success rate has been calculated on the basis that some women who have undergone fistula surgery have not returned for follow up and are therefore considered as failed repairs. There have been 55 cases of RVF since 1993, providing about 10 per cent of the total caseload.

Provenance of clients: Most clients come from Mopti and the bordering regions. Some come from neighbouring countries.

Typical client profile: The average age is 25 and most are primigravidus, but of those who have had children, they are generally of low parity. The majority of clients come from the countryside and are usually uneducated except for the few who have had one or two years of schooling at the most. They are always accompanied by someone; more and more with their husbands recently, thanks to awareness efforts initiated by Doctors of the World. Most of the women who come have spent an average of three days in labour. In general, the women have been living with fistula for less than a year.

Assessment and screening process:
- Before the operation, the client and her attendant are counselled and given an explanation of what to expect, the specifics of the operation and its potential results.
- A standard clinical exam is given (blood analyses, etc.).
- The fistula is classified based on its complexity (simple, complex or serious) and surgical procedures to be used are determined.

Post-operative care:
- Counselling is given about sexual relations, STIs and appropriate actions for future deliveries.
- Clients remain in the hospital for one month, and a post-op consultation is scheduled for a date three months later.
- Some women prefer to stay at the hospital after their recovery and work in the artisan workshop located on the outer limits of the hospital grounds.

Rehabilitation/reintegration: Doctors of the World works with Delta Survie, a local NGO, to help women to return to their communities with a set of skills they can use to generate an income. They are taught to make bogolon fabric and to dye and weave material, which they can sell to people in the community.

Community outreach: Doctors of the World has organized a local theatre group to perform a play near Mopti about a woman who has developed obstetric fistula. Approximately 45 minutes long, the drama recounts the story of a woman from the day of her marriage through her difficult pregnancy, the development of obstetric fistula and the challenges she faces as a result. The play, which has already been produced in several sites, has encouraged many men to bring their wives to Mopti for treatment.

Perceived support at the policy level: A statement of accord signed by the MOH and Doctors of the World in Mopti notes their mutual support.

Estimated fully-loaded cost per procedure: The
actual intervention would cost the hospital about $260 USD per case. However, because of funding from a variety of sources via Doctors of the World (such as the Materra Foundation of Germany, a private foundation in France and others), clients are only responsible for $25 USD. This amount covers everything from their first diagnosis to their month-long recovery, but it does not pay for their food.

**Resources:** Funding obtained by Doctors of the World.

**Barriers:**
- If funding doesn’t continue, Doctors of the World will have to cease services.

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**B. Centre Hôpitalier Universitaire du Point G**

(University Hospital of Point G), Bamako, visited 21 October 2002

**Size:** The Department of Urology handles fistula surgery. One operating theatre is available for the entire hospital, meaning none is specifically reserved for fistula clients. This theatre is extremely busy, which limits the time available for surgery on fistula clients. There is one recovery room with seven beds for the Department of Urology. Also located on the grounds is a facility known as the Oasis, which houses clients who are awaiting their repairs.

**Medical staff:** The Department of Urology consists of three state-certified nurses; two to three interns each year who serve as surgery assistants; and four surgeons, all of whom are urologists. Dr. Kalila Ouattara leads the team of four urologists, who perform all of the fistula repairs.

**Caseload:** Each surgeon operates on at least two fistulas per week, which creates a caseload of about 416 operations per year. This number does not reflect their capacity, however; if more space were available, more operations would be possible. A separate ward for fistula clients would be very helpful.

**Provenance of clients:** Clients come from all over the country. Most have complex fistulas that have been referred from regional hospitals. Some come from other countries, like Côte d’Ivoire (where treatment is very expensive) and Guinea. Rarely is a client from the capital of Bamako, as most women there deliver in hospitals and are thus less likely to develop fistula.

**Typical client profile:** The average age is 15; the extremes are 12 and 40. The older women are of high parity and their uteruses have ruptured during delivery. Clients usually come alone and most are poor, uneducated and rejected by their husbands. Most of the younger clients are primigravidus and married very early. Some have fistula as result of consequences of FGM. Four out of five women who come to the Department of Urology for treatment have fistula.

**Assessment and screening process:**
- Vaginal diagnosis is done after a client arrives leaking urine.
- A gynaecological exam is done and a catheter is inserted.
- Biological and radiological analysis are done, but often it is not possible to do a full exam because of lack of resources.
- For a period of one week to seven days before the operation, the client is told to maintain personal hygiene to disinfect the vaginal area. A sitz bath is recommended, which most clients cannot afford.

**Post-operative care:**
- A catheter is inserted; antibiotics are given if necessary.
- Sitz baths continues with permanganate, a disinfectant.
- The catheter is removed 15 days after the operation, and the client is examined for continence.
- The catheter is then reinserted for 10 days. If she no longer leaks urine at that time, the client is discharged.

**Rehabilitation/reintegration:** According to hospital staff, social reintegration activities are not necessary. If their fistula is closed, the women return to their husbands. Culturally, a woman is of little value if she is not married.” Most of these
women already knew how to make soap, sew, weave, etc., before developing fistula, and used those skills to generate income before their treatment. Because staff claim that the women return to their normal lives once they are fully recovered, some providers feel that it does not help to teach clients these activities as a means of instilling independence. The Oasis centre, which was originally conceived as a place to help women learn a useful skill, could be used as a recovery space as well as a hostel for women awaiting surgery.

Community outreach: Rarely seen. It has been reported that sometimes if a woman who has developed fistula moves to a different locale after total exclusion from her native community, a local mosque or a similar organization will help her get to a service delivery site where fistula surgery is performed and may raise money for her to have the operation. In addition, the local NGO Bengadi helps women in the town of Bla to receive treatment at Point G by assuming transportation costs as well as subsidizing the procedure. The Ministry of Social Development intervenes by signing an affidavit of indigence in extreme cases, allowing women with no means to receive treatment.

Perceived support at the policy level: Apart from the construction of the Oasis by the First Lady, who is president of the NGO Fondation Partage, and the Ministry of Social Development, no political support is perceived.

Estimated fully-loaded cost per procedure: The cost of the operation varies depending on the room a woman decides to occupy. There are three varieties of accommodation: 1st class, which ensures a private air-conditioned room with an indoor toilet, costing roughly $100 USD for 15 days post-op hospitalization; 2nd class, which gives her a private room with a ceiling fan and access to an outdoor toilet, costing $85 USD for 15 days; and 3rd class, which allows her to share a room that usually holds eight to 10 beds and a communal exterior toilet, costing $65 USD for 15 days. Most fistula clients choose the last option. A medical kit (including the sitz bath) costs about $76 USD.

Resources: Only what the hospital receives from clients for medical interventions.

Barriers:
- Inadequate funding.
- Policy decisions are made at an administrative level, and clinicians are often not involved. It would be difficult, however, for administrators to fully grasp the problems facing providers without input from those in the field.
- Inability to provide transportation to and from the hospital.

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The needs assessment team is deeply grateful to the following individuals in Mali for their assistance with this project:

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