Obstetric Fistula: A Preventable Tragedy

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Obstetric fistula disables millions of women and girls in developing countries, primarily in sub-Saharan Africa and South Asia. The United Nations Population Fund (UNFPA) recently launched a global campaign to end fistula, labeling this condition a preventable and treatable tragedy. Obstetric fistula overwhelmingly results from obstructed labor, which occurs in cases of cephalopelvic disproportion and malpresentation. Cephalopelvic disproportion often complicates deliveries in young, primiparous women of low gynecologic age. Social factors, including young age at marriage and malnutrition of girl children, can also contribute to cephalopelvic disproportion. These social etiologies must be addressed by prevention campaigns. Direct prevention of fistula can occur during delivery when skilled providers identify women and girls at risk for obstetric fistula and link them with innovative interventions, such as Fistula Prevention Centers, through which they can more readily access emergency obstetric care, and by setting strict time limits for laboring at home without progress. Community-based programs, such as the Tostan program in West Africa, use social education to prevent fistula. Moreover, effective surgical techniques for fistula repair are available in some settings and should be expanded to reach those in need. Midwives can play a key role in the prevention and treatment of this tragic obstetric complication.

"My name is Telanish Shabera. I am 14 years old. I was promised in marriage when I was 3, betrothed at 10, and pregnant at 12. After 3 days of labor, I was carried on a stretcher to a hospital, where my baby died 2 hours later. The obstructed labor left me incontinent. I smell, and I feel so ashamed."

INTRODUCTION

Vesicovaginal and rectovaginal fistulas are debilitating complications of obstructed labor, which primarily affect women and girls in developing countries. During prolonged labor, the baby's head compresses the vagina against the mother's pelvic bones, and if the compression continues long enough, the tissue becomes necrotic, forming an opening between the vaginal wall and the bladder or the rectum. Obstetric fistula has been virtually eliminated in developed countries, but it is still prevalent in many parts of the developing world. Although it is difficult to determine precise rates, it is estimated that there are at least 2 million women living with fistula, primarily in sub-Saharan Africa and South Asia, and some 50,000 to 100,000 women are affected each year.

Physical complications and comorbidities are associated with fistula; some caused by obstructed/prolonged labor, and others are sequelae of the fistula itself. These include fetal demise, damage to the cervix or pelvic bones, neurological conditions such as foot-drop, leakage of urine and/or feces into the vagina, urogenital infections, ammonia dermatitis, genital lacerations, kidney infections, and amenorrhea. The psychosocial complications are also devastating, and although they start with social isolation of affected women due to offensive odor, many women are abandoned, divorced, and ostracized. Women suffer for many years, since fistula repair services are rare, and even when available, women lack the knowledge that fistula can be repaired and/or they lack resources for treatment.

In this article, we discuss the prevalence and incidence of fistula, review literature on the etiologies and enabling factors that predispose to fistula, explain the comorbidities and sequelae of fistula, and describe treatments, including preoperative, intraoperative, and postoperative care. Prevention efforts, including examples of community-based prevention strategies, are emphasized. We conclude with implications for midwifery practice and research. Advocacy efforts aimed at prevention of fistula and treatment of affected girls and women are proposed.

LITERATURE REVIEW

This article is based on a comprehensive review of the literature, rather than a formal meta-analysis or systematic review. Studies related to fistula were identified through searches of the electronic databases MEDLINE, Popline, Sociological Abstracts, and PubMed, as well as searches for

Address correspondence to Suellen Miller, CNM, PhD, Women's Global Health Imperative, University of California, San Francisco, 74 New Montgomery Street, Suite 600, San Francisco, CA 94105-3444. E-mail: smiller@psg.ucsf.edu
on-line, Web-based documents using the “Google” search engine (http://www.google.com). Keyword searches consisted of the following terms: obstructed labor OR prolonged labor OR fistula OR cephalopelvic disproportion AND (age OR parity); gynecologic age; gynecologic age AND (prolonged labor OR fistula OR obstructed labor); and maternity waiting homes. We reviewed reference lists of relevant articles to find additional citations. We conducted Web site searches of international girl’s and women’s rights and health organizations, including United Nations Children’s Fund (UNICEF), United Nations High Commission for Human Rights, United Nations Population Fund (UNFPA), the Population Council, Centre for Development and Population Activities, International Center for Research on Women, EngenderHealth, Tostan, and the World Health Organization (WHO).

Authors attended conferences where new research on fistula and obstructed labor was presented, including the XVII International Federation of Gynecology and Obstetrics (FIGO) World Congress of Gynecology and Obstetrics in Santiago, Chile, November 2003, and the WHO/Population Council Technical Consultation on Married Adolescents, Geneva, December 2003. One of the authors (MW) visited the Hamlin Addis Ababa Fistula Hospital in Ethiopia in 1998. Another author (BC) repaired fistulas of African immigrant women at the Harlem Hospital in New York City and at the Princess Charity Maternal Child Hospital in Sierra Leone.

Tables 1 to 3 display the majority of data-based literature reviewed for this article; we have divided the literature into the following categories: fistula, age/pelvic maturity/obstructed labor, and maternity waiting homes.

PREVALENCe AND INCIDENCE OF OBSTETRIC FISTULA

Accurate prevalence rates of obstetric fistula (globally and nationally) are unavailable, due to inaccurate reporting, underreporting, and shame, which keeps women from complaining about fistula. There are certain countries in South Asia, specifically Bangladesh, and in sub-Saharan Africa, such as the Sudan, Ethiopia, Chad, Ghana, and Nigeria, where fistula prevalence is reported to be high. In 2002, the UNFPA conducted a 6-month needs assessment in 9 African countries, and estimated that there could be up to 1 million women living with fistulas in Nigeria alone, and that incidence rates could be as high as 2 to 3 per 1000 women in countries with high maternal mortality rates. Until better reporting methods become available, these estimates and small-scale, usually facility-based epidemiological reports will have to suffice.

ETIOLOGIES OF VESICOVAGINAL AND RECTOVAGINAL FISTULAS

In the United States and the United Kingdom, 70% of fistulas are a result of pelvic surgery. Other nonobstetric etiologies of fistula include malignancies, radiation therapy, infection, and trauma. Based on a review by Cron, data from the United States and the United Kingdom indicate that fistula is rare in developed countries and almost never results from obstructed or prolonged labor. A study from UCLA cited by Cron found only 43 cases of fistula over 20 years, with only 2 cases due to obstetric causes; the other cases were due to surgical complications and radiation treatment. Also cited in Cron, a UK study found 166 cases over 18 years, with only 21 of these due to obstetric causes. By contrast, 1 region in Nigeria reported 377 cases over 16 years, with 369 of these due to obstructed labor.

Obstructed Labor

In developing countries, 90% of fistulas are caused by obstructed labor. One study at the Addis Ababa fistula hospital in Ethiopia noted an average labor duration of 3.9 days in patients who subsequently presented with a fistula. During prolonged/obstructed labor, the soft tissue of the vagina is trapped between the fetal head and the bony pelvis. If the compression is not relieved, the tissue will become necrotic. Usually between 3 and 10 days postpartum, this necrotic tissue sloughs off and a fistula develops between the bladder and the vagina (vesicovaginal) or the rectum and the vagina (rectovaginal). Rectovaginal fistulas occur far less frequently, comprising 10% of fistulas. Lack of skilled attendance at birth, lack of emergency obstetric care, and lack of transportation to maternity facilities contribute to the high rates of prolonged and obstructed labor and resultant fistula in developing countries.

Direct and indirect factors predisposing to prolonged and obstructed labor include malpresentation and cephalopelvic disproportion. Malpresentation can occur in any woman, but it is more frequent in grand multiparas with lax uterine muscles.

The Relationship Between Cephalopelvic Disproportion and Young Age

Young girls and women (aged 10 to 19) suffer disproportionately from fistula. Although more women aged 20 to 45 give birth than women in the age group 10 to 19, close to 50% of all fistula cases occur in women aged 10 to 19. In
Jos, Nigeria, 45.8% of the fistula cases occurred in primiparous women. In studies from Nigeria and Ethiopia, adolescents constitute a disproportionate number of fistula cases. In Ethiopia, it is estimated that 3 in 1000 parturients develop fistula, the majority of whom are under 20. A Nigerian case-control study of 241 cases of fistula and 148 controls found that 27% occurred in women 15 years old or younger, and 59% occurred in women 18 years old or younger. Earlier age at marriage was also significantly associated with risk of fistula ($P < .01$).

The association between young age and fistula is most likely secondary to the increased incidence of cephalopelvic disproportion in younger women. Neither young age itself, early marriage, nor low parity alone are likely independent risk factors for cephalopelvic disproportion and subsequent obstructed labor and fistula, but they serve as proxies for pelvic immaturity. Pelvic bone maturity is a combination of the size and diameter of the pelvic bones as well as the diameter of the pelvic opening. Moerman, in a radiologic study of 90 early and middle adolescent girls in the United States, found that the actual size of the birth canal was smaller the first 3 years after menarche than at age 18, and that the dimensions of the inlet, midplane, and outlet of the birth canal of these young adolescent girls were contracted. According to Treffers, the pelvic bones of adolescents less than 16 years of age may be immature, particularly in the very poorest developing countries, where onset of puberty is late. This delay in pelvic maturity may correlate with the noted relationship between younger age and more frequent incidence of obstructed labor.

Low Gynecologic Age

Zlatnik and Burmeister first defined gynecologic age as the difference between chronologic age minus age at menarche; Scholl et al. defined “low” gynecologic age as less than 2 years between chronologic age and menarche. Miller and Lester posited that low gynecologic age might contribute to obstructed labor resulting in fistula. Although decreasing in developing countries, the age at menarche...
remains higher than seen in developed countries. Higher age at menarche, together with younger age at marriage, means that young, first-time mothers in developing countries are likely to have a lower gynecologic age than adolescent mothers in developed countries, even at the same chronologic age. Countries where the mean age at marriage is age 15 or below, such as Nigeria, Ethiopia, and Bangladesh, also exhibit high rates of fistula.

**Malnutrition Related to Pelvic Immaturity**

Other factors contributing to cephalopelvic disproportion and therefore, prolonged/obstructed labor among girls in developing countries, is chronic undernutrition and malnutrition, contributing to their being less likely to have reached adult size by menarche. In a study of fistula patients in Ethiopia, short height (less than 150 cm) imparted a relative risk of fistula of 1.83. Early malnutrition with resultant underdeveloped bone structure may have serious implications for women whose first pregnancy occurs soon after menarche. The frequency of underdeveloped pelvis and short height secondary to malnutrition further contributes to the high rates of obstructed and prolonged labor in some developing countries.

**COMORBIDITIES ASSOCIATED WITH FISTULA**

Fistula is part of the obstructed labor complex, a multiple organ syndrome, which also includes gynecologic, skeletal, neurological, and dermatologic injuries. In a 3-country study, 59% of women who had successfully repaired fistula also suffered other morbidities. Current theories attribute the amenorrhea to dysfunction of the gonadotropin hormonal axis. Foot drop, a condition that causes dragging of the foot and inability to walk without a cane or assistance, is thought to be due to prolonged compression of the sacral nerves by the fetal head as well as damage to the perineal nerve. In a study of 479 fistula patients in Nigeria, 27% had perineal nerve weakness and 38% had lower limb symptoms. Neurogenic bladder dysfunction can also result from prolonged labor. Ammonical dermatitis and vulvar excoriation are commonly seen as direct sequelae of the constant leaking of urine with vesicovaginal fistula.

**SOCIAL CONSEQUENCES ASSOCIATED WITH FISTULA**

As a result of the continuous leakage of urine and feces into the vagina, affected women often have an offensive odor, leading them to be ostracized by their husbands, families, and community. For example, families do not want fistula survivors preparing food or participating in family events. In addition, vaginal injuries can result in a woman’s inability to perform her expected duties, from manual labor to having sexual intercourse with her husband. In societies in which a woman’s worth is dependent on fulfilling her marital (sexual) duties, this situation is devastating.

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**Table 2. Articles on Association of Age, Gynecologic Age, Cephalopelvic Disproportion, and Obstructed Labor**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Description</th>
<th>Key Findings</th>
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<tbody>
<tr>
<td>Chumlea et al., 2003&lt;sup&gt;27&lt;/sup&gt;</td>
<td>USA: Cross-sectional study of 2510 females age 8-20</td>
<td>Median age at menarche: 12.43</td>
</tr>
<tr>
<td>Moerman, 1982&lt;sup&gt;20&lt;/sup&gt;</td>
<td>USA: Longitudinal study of clinical, laboratory, and x-rays of 90 adolescent girls</td>
<td>Pelvic inlet, midplane, and outlet clinically contracted during early adolescence (&lt;17); growth of pelvis continues for 3 y after menarche</td>
</tr>
<tr>
<td>Treffers, 2002&lt;sup&gt;21&lt;/sup&gt;</td>
<td>Global: Literature review</td>
<td>Obstructed labor a major health problem for young adolescent girls, particularly in specific geographic regions</td>
</tr>
<tr>
<td>Zlatnik and Burmeister, 1977&lt;sup&gt;22&lt;/sup&gt;</td>
<td>USA: Records review of 1005 girls &lt;17</td>
<td>Gynecologic age is the chronologic age minus age at menarche; Patients with low gynecologic age (&lt;2 y) have an increased likelihood of delivering a low birth weight baby compared to those with gynecologic age &gt;2 y; independent of chronologic age</td>
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**Table 3. Articles on Maternity Waiting Homes**

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<th>Authors</th>
<th>Description</th>
<th>Key Findings</th>
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<tr>
<td>Figa-Talmanca, 1996&lt;sup&gt;19&lt;/sup&gt;</td>
<td>Colombia and Cuba: Literature review and observations of maternity waiting homes</td>
<td>Maternal mortality ratio in Cuba dropped from 118 to 29/100,000 between 1962 and 1989; 30% of women in Cuba used a maternity waiting home in 1989</td>
</tr>
<tr>
<td>WHO, 1996&lt;sup&gt;40&lt;/sup&gt;</td>
<td>Bangladesh, Indonesia, Malawi, Mongolia, Mozambique, Papua New Guinea, Zimbabwe: 8 country-wide case studies of maternity waiting homes</td>
<td>Use of maternity waiting homes is associated with decreased maternal mortality, decreased perinatal mortality, decreased need for obstetric interventions, and increased birth weight</td>
</tr>
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Niger, fistula accounts for 63.3% of all divorces. According to an Ethiopian study of previously married women with fistula repairs (n = 78), all the women’s husbands either divorced them (n = 59) or abandoned them (n = 19). Kelly reported that husbands had rejected more than 50% of patients at the Hamlin Addis Ababa Fistula Hospital. In a Nigerian study of 31 fistula patients, the divorce rate, even after repair, was 55%; 87% of these women had a stillbirth. Given that fetal death often occurs during the obstructed labor that caused the fistula, the subsequent amenorrhea, which can often be permanent and even after repair lasts for up to 2 years, further compounds the woman’s childless state and cultural valuelessness.

TREATMENT

Given the impact of fistula on women’s and girls’ health, treatment and prevention are critical public health issues. Treatment includes surgery to repair the fistula and rehabilitation, including stretching and mobilizing limbs atrophied secondary to perineal and sciatic nerve damage. Physiotherapy is necessary for the rehabilitation of lower limb weakness, foot drop, and lower limb contracture. Psychological and emotional counseling, skill building, and outreach to locate women with fistula and transport them to distant treatment centers round out treatment efforts.

Although the success of fistula repairs is as high as 90%, many women remain unaware of the availability of treatment for their condition. It is estimated that 80% of women with fistulas never seek treatment. One of the main reasons women do not seek treatment is lack of knowledge that anything can be done. Second, shame associated with the condition often prevents women from seeking help. In Benin, despite the significant morbidity associated with fistulas, treatment is regarded as a “luxury.” Indeed, the medical costs of repair, between $150 and $450 US dollars, as well as significant transportation issues, prevent many women from receiving care.

There are very few hospitals in developing countries with the resources and trained staff to perform fistula repair, and women frequently must travel far to reach treatment facilities. At the Hamlin Addis Ababa Fistula Hospital, 82% of the women had traveled 700 km or more to seek treatment. The United Nations Population Fund’s Obstetric Fistula Needs Assessment found that although fistula repair is performed in several countries (Ethiopia, Kenya, Malawi, Mali, Mozambique, Niger, and Nigeria among others), sites within each country are few, and inadequate training and supplies limit the availability of treatment. There are few hospitals, such as the renowned Hamlin Addis Ababa Fistula Hospital, where more than a 1000 patients are treated annually, which are dedicated only to fistula repair (Figure 1).

Outreach, especially in rural areas, is crucial to recruiting women for treatment. Ideas for spreading awareness include using radio messages, community plays, and educating community outreach workers. For example, 70 women in Chad sought treatment after a successful missionary outreach campaign. Outreach by women who have undergone fistula repair and returned to their communities can spread awareness of fistula and treatment availability; these outreach workers can be role models providing hope to fistula sufferers.

Early Detection and Treatment

If a woman with a fistula manages to get to the hospital while still in labor, and the hospital has trained personnel, it is possible to encourage the fistula to close spontaneously. This can be accomplished by catheterization to avoid urine flowing through the fistula. Likewise, fistula can be prevented in women with prolonged labor by continuous catheterization and administration of antibiotics postpartum. Hilton, a pioneer in fistula treatment and repairs, recommends Foley catheterization for 6 to 8 weeks to promote spontaneous closure.

Preoperative Care

Early detection and treatment of obstetric fistula is rare. Patients arriving at fistula repair centers have often had the fistula for months or even years, and are suffering from malnutrition and anemia, which must be improved before surgery. Physical therapy for lower limb weakness, muscular contractures, and foot drop, as well as psychological counseling, begins preoperatively and will continue postoperatively. Some women have been lying curled in a fetal position for so long that they will need intensive therapy to be able to walk again.

Immediate preoperative care should include a complete physical examination. Fistulas are located by inserting a Foley catheter into the bladder during the presurgical evaluation and injecting a dilute solution of methylene blue and/or sterile milk (Figure 2). A thorough rectovaginal examination is performed to rule out rectovaginal fistulas.
Recommended laboratory evaluations include a complete blood count, a wet mount, and a check for sexually transmitted diseases. All infections should be treated prior to surgery (Box A).

**Postoperative Care**

Ureteral catheters should be left in place for 1 week, and urinary catheters for 2 weeks. If catheters become blocked, and the bladder distends, it is possible for urine to seep through the fistula and jeopardize the repair. To ensure that catheters do not become blocked, irrigation with normal saline or dilute boric acid solution should be performed daily. Patients may tolerate a soft diet on the first postoperative day and should progress to a regular diet by the second day. Vaginal packing is removed on the third postoperative day. The catheter should be clamped for short periods on the day before removal to accustom the bladder to distension. The patient is usually confined to bed for 2 weeks after the operation, so care to prevent bedsores is essential, particularly for those patients who have neurological and muscular contractures and/or weaknesses (Figure 3). Postfistula repair stress incontinence occurs in approximately 10% of patients.9 Although the majority (60%–98%) of repairs are successful, there are diminishing success rates with subsequent surgeries.9

The patient should be counseled to abstain from intercourse for at least 3 months and should be provided with a family-planning method if she desires. However, in some low-resource settings, family-planning services are often limited to condoms and/or instructions on the rhythm method. Due to many men’s low compliance with condoms, treated women often plan to use abstinence. If the patient becomes pregnant at any point after the repair, she should be advised to go to the nearest hospital for delivery by cesarean birth, if it is available.9 Lack of skilled birth attendant, lack of transportation, lack of emergency obstetric care, inability to pay hospital fees, and low status of girls and women are socioeconomic, cultural, and gender roles that contribute to the sentinel obstructed labor. These same factors may prevent the woman who had a fistula repair from having a safe subsequent delivery. Thus, the fistula may reopen during a vaginal birth.

**PREVENTION OF OBSTETRIC FISTULAS**

Fistula prevention involves strategies to educate communities about the cultural, social, and physiologic factors that increase the risk for fistula. On the basis of physiologic immaturity, characterized by small pelvic size in the years immediately following menarche,21–24 it is advisable to delay childbearing for several years after menarche to prevent prolonged and obstructed labor and their sequelae. This most likely will require influencing community values concerning the role of women in society. Prevention of obstructed labor and fistula should begin very early in each girl’s life. For example, improved nutrition and campaigns to raise awareness about the special nutritional needs of girl children to prevent chronic malnutrition and to improve the physical maturity of young mothers, as well as her overall health, are part of holistic fistula prevention strategies. Midwives, located in the rural communities where the most at-risk girls reside, can be pivotal in promoting preventative health practices that help prevent future development of obstetric fistulas.

Another prevention strategy is to provide timely access to safe delivery. Fistula can be prevented through early detection of potential cephalopelvic disproportion and malpresentation and referral of girls and women likely to experience prolonged/obstructed labor to emergency obstetric care facilities. These prevention strategies may include assessment of gynecologic age to determine pelvic maturity; encouraging births with skilled attendants; implementation of time limits for labor dependent on the distance from emergency obstetric care37; helping the family and community develop an emergency transport plan for pro-
longed labor; and the use of Fistula Prevention Centers in areas far from emergency obstetric care. The prevalence of fistula in specific regions of countries should be mapped and taken into consideration when developing regional plans for construction of emergency obstetric care facilities. Midwives can be key players in the early detection and referral of cephalopelvic disproportion, malpresentation, and prolonged, obstructed labor.

**Fistula Prevention Centers**

Fistula Prevention Centers\(^24\) are based on an earlier concept of maternity waiting homes, defined by Dr. Jerker Lilgestrand as “residential facilities, located near a medical facility capable of providing essential obstetric care, where women defined as ‘high risk’ can await their delivery and be transferred to a nearby medical facility shortly before delivery or earlier, should complications arise.”\(^38\) Maternity waiting homes were first conceptualized for women with known obstetric risk that would necessitate an operative delivery, but they have been used for any woman deemed to be at high risk for complications.\(^39\) A *Safe Motherhood Action Agenda*\(^38\) reports that although maternity waiting homes rely on a risk approach that is not advocated by the Safe Motherhood Initiative, per se, in circumstances in which “at-risk” women can be easily identified on the basis of markers such as cephalopelvic disproportion or malpresentation, maternity waiting homes may be appropriate. To address the problem of fistula due to obstructed labor, maternity waiting homes, reconceptualized as “Fistula Prevention Centers,” could be established in geographic regions where there is a high prevalence of young age at marriage, young age at childbirth, and/or a high prevalence of obstructed labor and fistula.\(^24\)

Evidence exists to support the concept that morbidity is reduced via use of maternity waiting homes. A WHO report\(^40\) on maternity waiting homes looked at published data and field communications from Cuba, Bangladesh, Ethiopia, Zimbabwe, Malawi, Mongolia, Mozambique, Colombia, Indonesia, and Nicaragua regarding the efficacy of maternity waiting homes. The Cuban experience, in particular, suggests that maternity waiting homes play an integral role in the reduction of maternal mortality and identified women’s risk based on both physiologic factors as well as by distance from emergency obstetric care. Anyone who lived more than 4 hours from an emergency obstetric care facility was entitled to stay at a maternity waiting home.\(^39\)

Potential problems for Fistula Prevention Centers include lack of funding, as such facilities are rarely self-sufficient; difficulty establishing referral systems and reimbursement for village-level practitioners; reluctance on the part of women and their families for her to be away from home for an undetermined period of time prior to delivery; and the financial burden this may pose. However, creative approaches to address these problems have been implemented by many programs and include allowing women to bring a person with them to the Fistula Prevention Center to assist them; participating in income-generating activities, such as selling handicrafts, food, and t-shirts\(^41\); and linking other services to the facility, such as education regarding maternal and infant nutrition, family planning, and income generation skills.

**Examples of Community-Based Prevention Strategies**

Several community-based organizations and international nongovernmental organizations have developed fistula prevention strategies. The Bugando Medical Centre Project on vesicovaginal fistula is an ongoing project in Mwanza, Tanzania, which may serve as a model for other programs.\(^42,43\)

Numerous organizations and hospitals, including the Tanzanian Midwives Association, formed a loose network to prevent fistula with 2 interrelated sociocultural and clinical agendas. They work together to change family and community attitudes that devalue girl’s health and lives, to improve antenatal screening, encourage skilled delivery attendance, and improve access to emergency obstetric care. In 1997, the Bugando project and the Kuleana Centre for Children’s Rights developed a booklet called *Haki z a nga, j e? (What about my rights?)* to raise awareness about fistula, to advance girls’ social status, and to delay early marriage and childbirth. More than 50,000 copies were widely distributed to religious leaders, community-based organizations, schools, and health centers. The booklet concludes with the following quote: “All people, including girls and women, have the right to education, good health care, freedom from violence, nutritious food, rest and relaxation, make decisions, be respected, be valued, be loved.”\(^42,43\)

The Tanzanian Midwives Association also works to prevent fistula, both by improving clinical care and by advancing girls’ social status and delaying childbirth. All Tanzanian Midwives Association members take a refresher course on screening for risk of fistula (age and position of baby) and referral and transport for prolonged labor. Together with local health workers and community leaders, the Tanzanian Midwives Association conducts village meetings to help communities advocate for girls’ and women’s rights to health. One such activity was a poster competition. Among the submissions was one of a girl refusing to marry until she finished school; another showed men devising a way to carry a woman to the hospital during prolonged labor. These posters were among the pictures featured in a 1999 calendar, and the images were painted into wall size murals and placed in public locations such as markets and hospitals.\(^42,43\)

*Tostan*, which means “breakthrough” in the Wolof language of Senegal and The Gambia, is a community-based educational organization in West Africa. Tostan works to increase women’s age at marriage and to lower maternal mortality through holistic education and development activities.\(^44\) For example, their approach to tradition is to examine how some traditional practices benefit all, whereas other traditional practices, which may benefit men, may not benefit or may actually harm women.\(^44\) After intensive
educational work, Tostan holds regional meetings in which village leaders declare publicly that they support the rights of girls and women and that they will end traditional practices harmful to women and girls. To date, 1271 communities have participated in these public renunciations of hurtful traditional practices.

United Nations Population Fund, EngenderHealth, and the International Federation of Gynecologists and Obstetricians (FIGO) are working to bring attention to the problem of obstetric fistula globally. Their emphasis is on both treatment and prevention, but as is often the case with public health issues, there are conflicting priorities between the two. As Maggie Bangser, Director of the Women’s Dignity Project, a regional initiative in Eastern Africa to address gender and health equity with a specific focus on obstetric fistula, said in a recent interview: “It’s one thing to repair the horrific physical damage. It’s harder but even more urgent to prevent the damage in the first place. That means confronting the social and economic ills that underlie girls’ vulnerability to fistula.”

CONCLUSIONS AND RECOMMENDATIONS

Given that millions of women in the developing world suffer from obstetric fistula, this tremendous public health issue requires immediate attention. Increasing the resources and skilled staff available locally to treat obstetric fistula is an important and necessary step toward improving the lives of women currently living with this condition.

Midwives in developed and developing countries can support ongoing efforts, such as those of United Nations Population Fund, EngenderHealth, and FIGO, to help prevent and treat fistula. Midwife researchers and clinical midwives in contact with women with fistula should play a role in epidemiologic research to discover the prevalence and incidence of fistula and help map where the prevalence and incidence are highest. In some areas, where lack of trained personnel limit the proportion of affected women who can be treated, midwives could be trained to assist in and/or perform fistula repair surgeries, as well as to counsel, reeducate, and participate in the preoperative and postoperative rehabilitation of fistula survivors. Midwifery advocates and community workers can conduct outreach information, education, and communication campaigns to alert women, families, and decision makers in remote communities to the availability of fistula repair centers and work on the policy level for more treatment centers and more training of providers in fistula repair.

Midwives everywhere can help address cultural and societal values to improve the health status of women. Midwives can strive first to understand these norms and then to work with communities to promote girls’ reproductive and education rights. Delaying childbearing by delaying marriage will allow young women to complete their physical development and decrease their chance of having an unattended obstructed labor.

Another goal is increasing access to emergency obstetric care. Midwives in high-prevalence areas can take a lead in advocating for and working in Fistula Prevention Centers in regions where emergency obstetric care is inaccessible. Student midwives looking for international placements and those midwives who are interested in working internationally may help by volunteering to work in fistula centers or with organizations working to prevent fistulas. The need is great, and the resources are limited, but awareness about this devastating condition is growing, and organizations, communities, and governments are rallying behind the call for attention to obstetric fistula. The disparity between fistula rates in developed and developing countries strongly suggests that obstetric fistula related to prolonged, obstructed labor can be prevented. Midwives, with their caring, skills, training, and proximity to the community have been champions of many reproductive health and rights campaigns; midwives can be at the forefront of the prevention and treatment of obstetric fistula.

We thank Erica Chong and her colleagues in the Gender, Family, and Development Program of the Population Council, and Debbie Rogow, Editor of the Quality/Calidad/Qualité Journal, for providing information on community outreach strategies.

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