MEETING SUMMARY


The Bill and Melinda Gates Institute for Population and Reproductive Health, Johns Hopkins Bloomberg School of Public Health
Johns Hopkins School of Medicine, Gynecology & Obstetrics Department
United Nations Population Fund (UNFPA)
International Federation of Gynecology and Obstetrics (FIGO)
World Health Organization (WHO)

From 28-29 July 2005, The Bill and Melinda Gates Institute for Population and Reproductive Health at Johns Hopkins Bloomberg School of Public Health hosted a meeting on the prevention and treatment of obstetric fistula. The two-day meeting was co-sponsored by the United Nations Population Fund (UNFPA), the World Health Organization (WHO), and the International Federation of Gynecology and Obstetrics (FIGO). More than 70 clinicians and public health experts from US, Canada, United Kingdom, Benin, Cote d'Ivoire, Eritrea, Ethiopia, Ghana, India, Malawi, Myanmar, Niger, Nigeria, Peru, Romania, and Tanzania participated in the meeting to discuss the extent of obstetric fistula and the best ways to address this public health problem. The meeting continued on July 30 with a subgroup remaining to review the meeting deliberations, define country-specific research priorities and needs, and outline a multi-country research plan. The meeting had several objectives: 1) to advance scientific knowledge on the risk and treatment of obstetric fistula, 2) prioritize research questions regarding public health and clinical responses to obstetric fistula, 3) inform the design of a study addressing one or more key research needs and 4) inform the public health response to and management of obstetric fistula.

Problem statement

Before the medical advances of the 20th century, fistula was quite common in Europe and the United States. Today, obstetric fistula is rare in high-income countries or in countries where emergency obstetric care is widely available. On the other hand, it is a childbearing-related injury that has been neglected in the developing world, despite the devastating impact it has on the lives of women.
Fistula is most common in sub-Saharan Africa and South Asia where access to or use of obstetric care is limited. Good data on fistula do not exist. In 1989, the World Health Organization (WHO) estimated that more than two million women were suffering from the sequelae of obstetric fistula and that at least 50,000 to 100,000 new cases occur each year. Needs assessments conducted by UNFPA and EngenderHealth as part of the Campaign to End Fistula suggest those numbers are far too low. WHO experts have also estimated that 2 to 3 per 1,000 deliveries develop fistula in areas of high maternal mortality, which means prevalence is much higher than the 1989 estimates.

Obstetric fistula usually occurs when a woman experiences obstructed labor for days and is unable to seek obstetric care and obtain a caesarean section. The prolonged, constant pressure of the baby’s head in the birth canal cuts off the blood supply to the soft tissues surrounding her bladder, rectum and vagina, causing a hole to form between the woman’s bladder and vagina and/or rectum. Obstructed labor leads almost invariably to the death of the baby during birth and is one of the leading causes of maternal death. When the mother survives, she is left with constant leaking of urine and/or faeces and is often rejected by her husband, blamed by the community and forced to leave her home.

**Obstetric Fistula Prevention**

Prevention is the key to ending obstetric fistula.

Prolonged, obstructed labor occurs most frequently in countries where early marriage, early or frequent childbearing (before the pelvis is fully developed or after multiple births), malnutrition, small stature, general poor health and poverty are commonplace, where access to antenatal and emergency obstetrical care are limited and the use of contraception is culturally restricted or unavailable. FIGO, WHO, UNFPA, ICM and the World Bank have produced a statement that by making available and accessible appropriate emergency obstetric care for all during labor and delivery, fistula would become rare.

Community-level prevention measures and social support mechanisms can also reduce the burden of disease from obstetric fistula. Unfortunately more published research can be found on some disorders more rare than obstetric fistula. The absence of empirical evidence to guide prevention, as well as treatment, practices significantly compromises...
the ability to develop effective fistula programs. Experts concurred that research addressing areas that expose women to fistula risk, such as early pregnancy, lack of education, high levels of poverty and cultural bias, will be necessary for obstetric fistula prevention.

**Clinical Management of Obstetric Fistula**

Fistula is treatable as well as preventable. The impact of the success of fistula treatment programs in many countries extends beyond the treatment of fistula cases. It proves that under skilled hands, surgical treatment of obstetric fistula is possible and that by replicating its success, obstetric fistula in developing countries will become a rare condition.

Reconstructive surgery can mend this injury, but women are either unaware that treatment is available, or cannot access or afford it. If the surgical fistula closure is successful and the associated co-morbidities are treated, women can resume full and productive lives and have more children. The reported success rates in the literature are between 70 to 90 per cent for simple fistulas, and between 30 and 60 per cent for complex or complicated cases. However, a staging system has not been yet established and each author defines success differently.

During the meeting, questions were raised about the appropriate time to assess the surgical repair’s outcome: immediately after hospital discharge or after a longer period of time. Also, the need for a standard classification and case-reporting system was reinforced. Preoperative care, including good nutrition, treatment of other infections and the need of antibiotherapy before surgery were discussed.

Urinary incontinence is the main complication accompanying fistula surgery. Between 25 and 55 per cent of women suffer from urinary incontinence even after the fistula is successfully repaired. There is no available data on how many women are able to return to normal sexual functioning or have children after successful surgical repairs and it is expected that a significant proportion of women have painful intercourse or are not able to have intercourse due to scarred vaginas.
Understanding obstetric fistula prevention and treatment needs is central to the sustainable management of fistula cases, success in minimizing the side effects of clinical management and the eradication of obstetric fistula in the developing world.

**Lectures and Discussions**

The plenary lectures were presented by distinguished international experts who offered state-of-the-art information in obstetric fistula knowledge and practice. The experts reviewed and synthesized the current knowledge on obstetric fistula through the latest evidence.

An overview of epidemiologic research and clinical management of obstetric fistula introduced participants to the state of current evidence. Participants agreed that there is very little scientific research on obstetric fistula published to date and the lack of data and randomized trials on the subject present a barrier to designing prevention measures. Potential risk factors of obstetric fistula were identified: lack of access to appropriate emergency obstetric care, young age, low parity and poverty. Participants concluded that strategies to reduce maternal mortality should also reduce maternal morbidity and that the most important single factor is access to appropriate emergency obstetric care.

Presenters showed that obstetric fistulas result from prolonged, obstructed and neglected labor, coupled with a lack of medical intervention to relieve it. Prolonged, obstructed labor often leads to pressure necrosis of the anterior vaginal wall and the underlying bladder neck and is sometimes accompanied by more extensive necrosis that involves the urethra, trigone and anterior cervix.

Presenters also reviewed various classification systems proposed in the literature, the obstetric labor injury complex described by Arrowsmith, Hamlin and Wall in 1996 and the pathology associated with obstetric fistulas such as sphincteric abnormalities, secondary fistulas, urethral defects, ureteral fistula or obstruction, coexistent ureteric injuries, genital prolapse, low bladder compliance or detrusor instability. Currently unresolved issues on the epidemiology, physiopathology, diagnosis, management and surgical outcome were identified as topics meriting further attention.
Currently, there is no universally accepted scientific classification system for fistulas. An international staging system would allow health care providers to report and compare outcomes of various surgeries and treatments of fistulas. An evidence-based system allowing one to anticipate or predict success rates is needed and will involve long term scientific study. Selection criteria for VVF surgery were discussed, and participants agreed a classification system should be focus on clinical issues and use existing VVF data for this purpose. Surgical results reported by numerous speakers indicated that an ideal staging system should be simple and easy to establish with low technology requirements. The system should also include measures of the fistula’s size, anatomic location, degree of scarring and urethral status, number of fistulas, number of previous repair attempts and anesthesia conditions. Multiple speakers repeatedly stressed the need for a standardized definition of success.

Surgical techniques of obstetric fistula repair by route taken were systematically explained, together with techniques for gynatresia treatment and urinary diversion. Surgical and long-term complications for urinary diversion were discussed, particularly for the African context. Various speakers shared their experiences with the requirements for successful repairs and predictors of adverse postoperative outcomes. Presenters from Ghana and Nigeria reinforced that the only available option in high-VVF countries is the low tech approach given facilities have very limited services and resources. Due to the scarcity of resources, long-term follow-up is virtually non-existent; and patients’ rehabilitation and community reintegration are difficult to accomplish.

The importance of pre- and post-operative care of fistula patients was emphasized by various presenters and acknowledged as vital to the successful management of fistula patients. Preoperative care aims to optimize patients’ general health condition and prepare them for surgery, whereas post-operative care is critical to a successful outcome and minimizes the risk of further complications. Three specific issues on pre- and post-operative care received significant attention during the meeting: 1) the administration of prophylactic antibiotics since there is no evidence of the benefits of long courses of use; 2) the duration of postoperative bladder drainage; and 3) the need for caesarean section in subsequent pregnancies after a successful fistula repair. However, speakers noted that no unanimity of opinion on optimal pre- and post-operative exists in the literature.
Country-representatives from Benin, Ghana, Niger, Nigeria, and Tanzania presented an overview of obstetric fistula treatment and management in their respective countries. The Ethiopian participants described training opportunities for surgeons at the Fistula Hospital in Addis Ababa.

Two parallel group sessions were conducted on clinical and public health issues related to obstetric fistula. Participants again agreed upon the need for more uniform and systematic classification for all types of obstetric fistulas, compilation of an international database of fistula case characteristics and treatment success outcomes, and the development of standard management protocols. They also stressed the importance of establishing diagnostic and management standards and improved clinical and interdisciplinary capacity for treatment of urinary incontinence in fistula patients. Ethical issues related to treating stress incontinence through primary or secondary diversion procedures were actively discussed, including if and when diversions should be performed, counseling and obtaining patient informed consent, and whether it was necessary to train practitioners from low-income countries in the surgical skills for diversion. Ways for improving community knowledge on obstetric fistula prevention and treatment, meeting women’s needs for social-reintegration and addressing patients’ associated rights were discussed. Participants reiterated the need for pregnant women’s access to appropriate and reliable emergency obstetric care, particularly for cesarean sections. The re-integration experiences of two NGOs, one in Tanzania and one in northern Nigeria, showed how fistula serves as a lens to the feminization of poverty. Both demonstrated, however, that training former fistula patients on income-generating skills can restore them to their homes and villages and help them regain, if not surpass, their pre-surgery status. On the issue of building public health-clinical partnerships, participants proposed expanding the partnerships to include religious and social groups and families and engaging former fistula patients to become champions of change.

A research agenda for the prevention and treatment of obstetric fistula

It is difficult to properly prevent and treat obstetric fistula in the absence of data and evidence. Conferees quickly concurred on prioritizing research in six main areas: a) assessing the burden of disease from obstetric fistula; b) identifying effective community-level prevention measures such as delaying early childbearing, raising
awareness for skilled attendance at birth and mobilizing response to signs of pregnancy complications; c) developing a standard classification system and establishing an international registry of fistula cases; d) conducting operations research on barriers to emergency obstetric care at the community, facility, provider and patient levels; e) identifying evidence-based practices for successful fistula case management, including catheterization, stress incontinence, diversion protocols and repeat fistula repair; and f) assessing the costs of methods for treating fistula appropriate for resource-constrained settings. Leadership and resources from all quarters will be needed to implement this research agenda and assure prevention and treatment practices are adequately informed by good data.

**System response to better prevention and treatment of obstetric fistula**

Through strong community and public health education efforts, improved access to adequate medical care for all pregnant women and available, accessible and effective emergency obstetric care, particularly for cesarean sections, for all who develop pregnancy complications, obstetric fistula can be made rare. In addition, young girls should not be exposed to the risk of early childbearing until their reproductive physiology is adequately mature. Delaying marriage or providing access to contraception are means to prevent the risk of childbearing at too young an age. Fistula patients also need surgical treatment for their condition, counseling for their psychological and emotional damage and support for social re-integration.

Meeting participants additionally cited the need for capacity building efforts to strengthen clinical training to treat and manage fistula cases, while mindful of retention issues for skilled health professionals in developing countries. Similarly, they felt former fistula patients now re-integrated into society could be engaged as champions for change by sharing and recording their life histories and experiences in seeking and obtaining appropriate obstetric care and social support.

**Sponsoring Organizations**

The mission of The Bill and Melinda Gates for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health is to build individual
and institutional capacity in countries of the developing world to strengthen the effectiveness of population, family planning and reproductive health policies and programs. The Department of Gynecology and Obstetrics at the Johns Hopkins School of Medicine serves women’s health needs in many areas, including high-risk obstetric care, reproductive endocrinology, gynecologic oncology, and comprehensive diagnosis and treatment of all gynecologic disorders, including pelvic floor disorders.

The United Nations Population Fund has been working with the World Health Organization and the International Federation of Gynecology and Obstetrics and other partners such as USAID and non-governmental organizations to assess needs in countries where obstetric fistula represents a major public health concern. The UNFPA has led the first Global Campaign to End Fistula with a goal is to eventually make fistula as rare in Africa and Asia as it is in the developed world. The Campaign currently covers more than 30 countries in sub-Saharan Africa, South Asia and some Arab states.