



## Community-Based Screening for Obstetric Fistula in Ebonyi State, Nigeria

### WHAT IS FISTULA?

Obstetric fistula is a childbirth injury, usually occurring when a woman is in labor too long or when delivery is obstructed, and she has no access to a cesarean section. She endures internal injuries that leave her incontinent, trickling urine and sometimes feces through her vagina.

Fistula Care works to prevent fistula from occurring, treats and cares for women with fistula, and assists in their rehabilitation and reintegration. For more information about fistula and the Fistula Care project, visit [www.fistulacare.org](http://www.fistulacare.org).

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### Background

Obstetric fistula, one of the most debilitating maternal health morbidities, imposes enormous medical and psychological burdens. Because of the stigma associated with the condition, the true prevalence and incidence remain difficult to determine.

In Nigeria, health care professionals formerly believed that obstetric fistula primarily occurred in the northern part of the country. However, field experience and recent findings from the Demographic and Health Survey (DHS) have shown otherwise: In the 2008 Nigeria DHS, the percentage of women reporting having experienced symptoms consistent with obstetric fistula ranged from about 0.5% in the north to around 0.3% in the southern areas of the country (NPC & ICF Macro, 2009).

While the most common cause of obstetric fistula is obstructed or prolonged labor, underlying factors such as poverty, a dearth of skilled birth attendants, poor health-seeking behaviors, poor referral systems, poor transportation networks, and inadequate obstetric care services contribute to the occurrence of obstetric fistula. These challenges are not a problem of only one region within the country or of Nigeria alone. These same conditions apply in many areas of Nigeria and in many countries in Sub-Saharan Africa and beyond.

### Obstetric Fistula in Ebonyi State

Created in 1996, Ebonyi State is located in the southeastern part of Nigeria, with an estimated population of about 2.2 million (Africa Masterweb, no date). The state is composed of 13 local government areas (LGAs). The 2008 Nigeria DHS (NPC & ICF Macro, 2009) reported the following findings among women of reproductive health age in Ebonyi State:

- Six percent were using any method of family planning.
- Seventy-six percent received antenatal care during the last pregnancy.
- Forty percent delivered their most recent child in a health facility.
- Forty-six percent were attended by a skilled birth attendant at their last delivery.
- Women's median age at first birth was 21 years.

In 2003, Ebonyi University Teaching Hospital (EBUTH) established a fistula repair unit within the obstetrics and gynecology department. EBUTH is located in Abakaliki, the capital of Ebonyi State. Between 2003 and 2007, approximately 120 women from different parts of the state and surrounding states received repair surgery at this unit.

In 2007, the Mother and Child Care Initiative (MCCI) was launched in Ebonyi State under the leadership and support of the governor's wife, the Honorable Mrs. Josephine Elechi. MCCI's goal is to reduce maternal mortality and morbidity (see Figure 1). It also aims to shorten the delays that women face when accessing health services. MCCI stresses certain medical conditions (such as fistula, breast and cervical cancer, and HIV/AIDS) and certain populations (such as rural girls, orphans, and other vulnerable children).

In 2008, an obstetric fistula center was constructed next door to EBUTH. When the center opened its doors, it was named the South East Regional VVF Centre, and surgeons from EBUTH were posted to the new facility. In April 2011, the Federal Ministry of Health took over management of the center, and it was renamed the National Obstetric Fistula Centre Abakaliki.

## Figure 1. Key Elements of the MCCI

- Establishing Maternal Mortality and Morbidity Monitoring Committees at state, LGA, and ward levels to conduct confidential inquiries into maternal deaths, appraise the level of antenatal care, gather statistics, and annually assess progress
- Requiring women to register for and receive antenatal and postnatal care
- Establishing systems that refer women for appropriate care when labor lasts 10 or more hours
- Requiring registration of deaths that occur during pregnancy, labor, and delivery or within six weeks of delivery, with review by the appropriate Maternal Mortality and Morbidity Monitoring Committee

In 2008, prior to the construction of the fistula center, MCCI deployed a specialized medical team to conduct community-based screening for obstetric fistula in all Ebonyi State LGAs. The objectives were to:

- Assist in planning for fistula treatment services
- Estimate prevalence and incidence
- Determine the magnitude of the problem in the state
- Identify as many women as possible living with fistula
- Provide free treatment services

### Planning for Community-Based Screening

When planning for the screening initiative, MCCI and EBUTH coordinated closely with the LGAs, assembled a skilled medical team, and arranged for equipment, supplies, and transportation.

### Coordinating with LGAs

Approximately three months before screening began, MCCI met with leaders and stakeholders from all 13 LGAs to explain the objectives of the initiative, solicit support, discuss the role of the LGAs, and plan dates for screening events. LGA leaders helped to identify centrally located hospitals and health facilities where screening could be done.

The role of the LGAs was to raise awareness about screening events, identify women to be screened, and transport women to the screening locations. To reach out to women, LGAs used radio, television, and community gatherings. The main message was that women who were leaking urine should come forward for free screening and treatment.

### Assembling the Team

With support from MCCI, EBUTH established a team of nine staff to

participate in the screening events. Team members were as follows:

- 1 fistula surgeon
- 1 doctor
- 2 nurses: 1 to assist with screening, 1 to sterilize equipment
- 2 health educators
- 2 drivers
- 1 maintenance worker for the generator

The health educators spoke to women who attended the events about a range of reproductive health issues.

### Supplies and Equipment

The screening team brought with them all necessary supplies and equipment (Figure 2).

Two vehicles transported the team and equipment. The team planned to visit three LGAs per week, traveling to and from Abakaliki each day; the furthest LGA was approximately a two-hour drive from the capital.

### Results Screening

Between June 9 and July 7, 2008, the screening team traveled to 12 of the state's 13 LGAs and conducted 14 screening sessions. The team was unable to travel to one of the LGAs, but clients from that LGA were transported to the nearest LGA for screening.

A median of 39 women sought services at each screening event. In two LGAs, more than 50 women did so; in those LGAs, the team was unable to screen all women in one day and had to return the next day to complete the work. Over the four-week period, the team examined a total of 559 women and diagnosed 306 cases (55%) of obstetric fistula (Table 1). Women who did not have fistula were diagnosed with a variety of conditions, including uterine prolapse and cervical cancer; these women were referred to EBUTH or the Federal Medical Center in Abakaliki for treatment and care.

Screening consisted of a brief history (age, parity, history of any previous surgery) and physical examination of the abdomen and pelvic area. When a fistula was not visible during the pelvic exam, the surgeon performed a dye test to determine the source of leakage. Some women were diagnosed with bladder stones, and the surgeon was able to remove them during the exam. Each physical exam took about 10 minutes to complete. One of the nurses or the second doctor recorded findings in small notebooks, one per client; the team kept the notebooks.

After each screening, the surgeon explained the diagnosis to the woman; if she had a fistula, she was told that a representative from her LGA would contact her to schedule surgery if she wished to have it and that the services would be provided free of charge. Team members prepared a list of the women diagnosed with fistula and their addresses; they gave the list to the LGA chair, who was responsible for follow-up, including providing transportation.

The assessment team collected basic demographic information about women diagnosed with fistula: age, parity, and number of years living with fistula. Data on age and number of years living with fistula are difficult to interpret, because many

Figure 2. Equipment and Supplies for Community-Based Screening

- Examination table with stirrups
- Specula (20)
- Sponge-holding forceps
- Foley catheters
- Metal catheters
- Adjustable lamp
- Portable sterilizer
- Generator and fuel
- Gauze
- Cidex
- Savlon
- Antibiotics
- Hematinics
- Pain medication
- Buckets
- Lined exercise notebooks in which to record findings

**Table 1. Number of women screened and diagnosed with obstetric fistula, by LGA, June–July 2008**

LGA	Total number screened	Number (%) diagnosed with fistula
1	27	10 (37.0)
2	40	26 (65.0)
3	39	26 (66.7)
4	36	22 (61.1)
5	58	33 (56.9)
6	40	24 (60.0)
7	32	16 (50.0)
8	30	11 (36.7)
9	57	22 (38.6)
10	34	23 (67.6)
11	60	35 (58.3)
12	78	43 (55.1)
13	28	15 (53.6)
Total	559	306 (54.7)

of the women were uncertain about this information. The team sometimes estimated these data by asking women when their first pregnancy occurred or by correlating milestones with major events, such as the Nigerian civil war. More than half of the women diagnosed with fistula were estimated to be over the age of 40 (Table 2). About 80% had been living with fistula for more than five years. More than two-thirds had three or more living children.

### Surgical Services

For the first round of surgery, the national fistula center operated on 81 clients. (The facility has a total of 90 beds.) The center chose women from each LGA, based on two criteria:

- The proportion of women who needed surgery (i.e., more women were selected from LGAs with a larger proportion of women needing surgery)
- The age of the woman<sup>1</sup>

The majority of women with fistula who were identified in the 2008 screening have undergone surgical repair; about 25 women, all 70 or older, have not come forward for repair. It is unclear why they have not; fear of surgery may be a factor. While many women in the 2008 screening sessions were older, the center now sees younger women from the same communities who are seeking repair. It is unknown why these women did not emerge during the 2008 screening; perhaps they now come forward because

they had spoken to women who had surgery. The screening program identified 306 women in need of repair services; by May 2011, a total of 761 had received surgery, demonstrating that many more women needed services than were originally identified, and suggesting that more may yet need to be identified.

### Lessons Learned and Recommendations

**Participatory planning:** Because the planning process included stakeholders from the repair center, MCCI, the LGAs, and health facilities, community mobilization efforts went well. Likewise, provision of equipment and supplies was excellent.

**Screening sites:** Though the team tried to select a central screening location for each LGA, it may still have been too far for some women to travel, and holding only one screening sessions per LGA may have limited access for women who were unavailable on that date. If the repair center were to conduct another community screening, it would organize more than one session per LGA, to increase access.

**Table 2. Characteristics of women diagnosed with fistula**

	N	%
<b>Age</b> Mean=45.5		
15–20	15	4.9
21–29	33	10.8
30–39	78	25.5
40–49	62	20.3
≥50	118	38.6
Total	306	100.0
<b>Parity</b> Mean=4.3		
1	77	25.2
2	36	11.8
3	34	11.1
4	37	12.1
≥5	122	39.9
Total	306	100.0
<b>Number of years with fistula</b> Mean=15.8 years		
≤1	16	5.2
1–5	50	16.3
6–10	60	19.6
11–15	34	11.1
16–20	47	15.4
21–25	39	12.7
26–30	32	10.5
>30	28	9.2
Total	306	100.0
<b>Outcome of pregnancy that caused the fistula</b>		
Live birth	103	33.7
Stillbirth	188	61.4
No information	15	4.9
Total	306	100.0

**Scheduling of screening events:** The screening events generated significant demand for repair services. Because of the limited capacity of the repair center, however, it took more than one year to clear the backlog of cases generated by screening. (In 2008, the center had only one trained surgeon.) To prevent a backlog, it may be useful to schedule screening events over several months, while continuing routine provision of surgical repairs, or organize events that bring surgeons from other facilities to assist the backlog of surgery (known as a pooled effort in Nigeria) (Fistula Care, 2010).

**Screening teams:** The size and composition of the screening teams was appropriate, given the number of women who sought services. If the number of

# NIGERIA



## ABOUT NIGERIA

With an estimated 162 million people, Nigeria is the most populous nation in Africa (PRB, 2011). Although Nigerians make up 2% of the world's population, they account for 10% of all maternal deaths (WHO, 2007). Fifteen percent of women in Nigeria currently use some form of contraception (PRB, 2011).

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women to be screened will exceed the average of 39 per LGA, the size of the clinical team will need to be considered and possibly increased. Additional fistula surgeons or trained nurses might be needed to screen women, and more nurses might be necessary to assist. If a larger team is required, it will need additional equipment and supplies and increased physical space at the health facility. Providers who are not part of the surgical repair team can be trained to screen women and diagnose fistula.

**Record keeping:** The use of notebooks to record information about each woman worked well and was practical. However, the nurses did not receive enough training about data collection. Some data were missing. An alternative to notebooks is a register book, with columns that capture the details for all women screened. Each screening location would have its own register book.

**Interval between screening and repair:** Ideally, the time between screening and repair surgery should be short, no longer than one month. Because screening teams tell women that treatment is available, quality of care requires that repair services be offered as quickly as possible. Prompt repair services also enhance the credibility of fistula repair initiatives; if women must wait a long time for services, they may lose faith in the program. In this case, the repair center was not ready to do surgery until four months after screening, and some women had to wait even longer. Fortunately, the center had a good record-keeping system, with detailed contact information for prospective clients.

**Screening for uterine prolapse:** Uterine prolapse is an important and debilitating maternal morbidity. During the first five screening events, the team recorded 53 women with this condition. The screening team estimates that nearly one-third of the women they screened had prolapse. The team then stopped recording information about prolapse, since the focus of the program was obstetric fistula. While the team did refer women with prolapse for care, it is not known if they sought treatment. In hindsight, it would have been better to continue collecting information about prolapse, to understand more about the magnitude of this problem. Any future community screening efforts should record and collect information about prolapse and other maternal morbidities that result in incontinence.

**Unidentified needs:** While the screening program successfully identified a backlog of women needing surgery, current admissions suggest that many women did not come forward to the screening. Making more screening sites available might encourage more women to participate. Also, asking women who have had repair surgery to serve as spokespersons may be an effective strategy to encourage women to come forward for screening and for treatment.

### Note

1. The center gave priority to younger women, in the belief that repair for them was likely to prevent many years of shame and discrimination; older women were thought to have made some level of adjustment to the condition and its consequences.

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