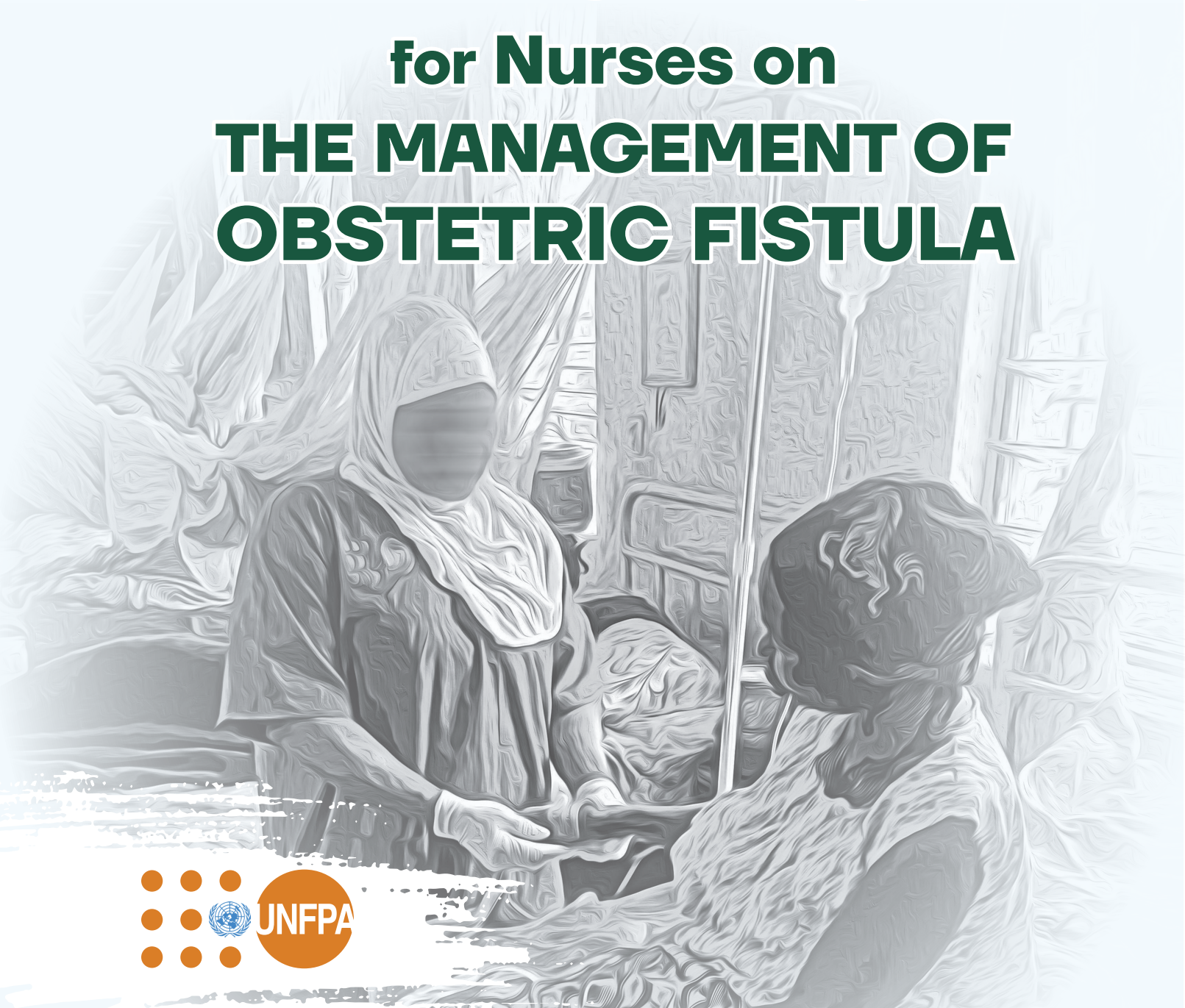
NATIONAL TRAINING MANUAL

for Nurses on

THE MANAGEMENT OF OBSTETRIC FISTULA



UNFPA

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ACRONYMS

COVID-19	Coronavirus Disease 2019
EUA	Examination Under Anaesthesia
FIGO	International Federation of Gynaecology and Obstetrics
FMOHSW	Federal Ministry of Health and Social Welfare
HIV	Human Immunodeficiency Virus
ISC	Intermittent self-catheterization
ISOFS	International Society of Obstetric Fistula Surgeons
IVF	In Vitro Fertilisation
JC	Juxta Cervical
JU	Juxta Urethral
MRC	Medical Research Council
MV	Mid Vaginal
NCWS	National Council of Women Societies
NFVVF	National Foundation on Vesico Vaginal Fistula
NGOs	Non-Governmental Organisation
NSAIDS	Non Steroid Anti-inflammatory Drugs
NSF	National Strategic Framework
OBGYN	Obstetrics and Gynaecology
OF	Obstetric Fistula
PBAs	Performance Based Assessment
PFRD	Persistent Fistula Related Disorders
RVF	Recto-vaginal Fistula
SOP	Standard Operating Procedure
UN	United Nations
UNFPA	United Nations Population Fund
USA	United States of America
UTI	Urinary Tract Infection
VVF	Vesico Vaginal Fistula
WAHO	West Africa Health Organization
WHO	World Health Organization

FOREWORD

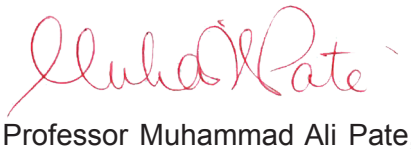
Obstetric Fistula, has persisted as a public health issue in the developing world. Nigeria has an estimated prevalence of 114,048 and an incidence of 12,000 of women and girls living with Obstetric Fistula. Those Women and girls affected with obstetric fistula suffer great physical, social, psychological and mental ill Health.

Currently there are 20 dedicated Fistula Treatment Centres in Nigeria. Despite these dedicated fistula centres in Nigeria, it is estimated that these centres can only offer surgical care to about 5,000 women with fistula annually at different levels of expertise. At this maximum rate of annual repairs, it will take about 30 years to treat the backlog of women requiring fistula surgeries, ignoring new cases. With renewed global attention to the burden of obstetric fistula championed by UNFPA, WAHO and USAID MOMENTUM Safe Surgery in Family Planning and Obstetrics (led by EngenderHealth) in line with the National Strategic Framework for the Elimination of Obstetric Fistula in Nigeria, surgical management and rehabilitation of women with obstetric fistula will become central in addressing the burden of obstetric fistula while preventive measures are being strengthened.

It is therefore, obvious that there is a need to intensify training of more surgeons and other health workers that will deal with the backlog and provide care closer to the women suffering from obstetric fistula.

The goal of this document is to provide a national standard training material in line with global standards that shall provide respectful, simple, affordable, quality and evidence-based care that will guarantee improved quality of life for women and girls living with obstetric fistula including women with fistula deemed inoperable.

I therefore, approve the use of this document which has been carefully articulated by the VVF Technical Sub-Committee of the Reproductive Health Working Group with the hope that it will ensure good quality and uniformity in the training of Nurses on the management of obstetric fistula in Nigeria.



Professor Muhammad Ali Pate, CON
Honourable Minister of Health and Social Welfare
April, 2024

ACKNOWLEDGEMENT

The Department of Family Health of the Federal Ministry of Health and Social Welfare wishes to express sincere gratitude to the various individuals and organizations that contributed and participated actively in the development of the National Training Manual for Nurses on the management of Obstetric Fistula in Nigeria.

Special appreciation goes to Mrs. Tinu Taylor, former Director of Reproductive Health Division who initiated the process and the members of the VVF Technical Sub-Committee of the National Reproductive Health Technical Working Group. Further thanks also goes to UNFPA, WAHO and USAID MOMENTUM Safe Surgery in Family and Obstetrics (led by EngerHealth) for their financial support and other efforts to end obstetric fistula in Nigeria. Very importantly, we wish to appreciate the contribution of Prof. Oladosu Ojengbede, Prof. Johnson A. Obuna, Prof. Sunday Adeoye, Prof. Sunday Lengmang, Dr. Sa'ad Idris Dr. Musa Elisha, Dr. Kabiru Atta, Dr. Halima Bello, Or. Hassan Ladan Wara, Dr. Sa'adiya Nasir, Dr. Halima Mukaddas, Dr. Suleiman Taofeeg, Mr. Musa Isah, Dr. Amir |. Yola, Dr. Yusuf Shu'aibu and Dr. Kabir Abubakar for their technical inputs during the development and finalization process. . Finally, appreciation to the following officers of Family Health Department whose immense contributions and dedication led to the production of this document: Dr. Binyerem C. Ukaire (Director, Family Health Department}, Mr. Laurence Anyanwu (Director, Reproductive Health Division), Mrs. Remi Bajomo (Director, VVF Branch}, Dr. Henry Jumbo (Assistant Director), Mrs. Aungwa Joy ©., Mr. Faruk Usman, Mrs. Orji Nnajiuba Ijeuru Constance and Miss. Amukpo Ono Betty.

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Director, Family Health Department

Chapter 1 INTRODUCTION

1.1 BACKGROUND

Obstetric Fistula, has persisted as a public health issue in the developing world. Nigeria has an estimated 0.24% (114,048) prevalence of women and girls living with obstetric fistula, [1] and an annual incidence of 12,000 cases. Those Women and girls affected with genital fistula suffer great physical, social, psychological and mental ill Health. [2]

Currently there are 24 Fistula Treatment Centres in Nigeria. Despite these dedicated fistula centres in Nigeria, it is estimated that these centres can only offer surgical care to about 5,000 women with fistula annually at different levels of expertise. [2] At this maximum rate of annual repairs, it will take about 30 years to treat the backlog of women requiring fistula surgeries, ignoring new cases. Furthermore, there are hundreds of women and girls in Nigeria with genital fistula who are deemed inoperable, especially in older fistula treatment centres. At this rate, the current global call to end fistula in our generation will be a mirage for Nigeria.

This therefore brings forward the need to increase access to fistula repair services and ensure that the services are of high quality for all women and girls living with genital fistulae, including those with fistulae that are deemed inoperable. To achieve this feat, human resource development is central and should be coordinated via an organised scheme of events starting with policy documentation, and capacity building.

The National Strategic Framework for the elimination of obstetric fistula in Nigeria (2025-2030) provides the policy framework focusing among other issues on 30% reduction in the prevalence of female genital fistula by 2030. The standards of practice for doctors and nurses in Nigeria, is a policy document that is a decade old and lags behind current scientific realities and global health challenges. The absence of a national training manual on fistula care has led to variance in the quality of training of fistula surgeons and nurses in Nigeria. This situation calls for development of a quality training manual on fistula care to achieve a renewed acceleration of repair to eliminate fistula by 2030.

The Federal Ministry of Health and Social Welfare with support from UNFPA and WAHO therefore, set out to bridge this policy gap by producing this training manual for doctors so as to meet the human resource needs through training of fistula surgeons that will accelerate access to the management of women and girls with genital fistula in Nigeria.

The goal of this document is to provide a national standard training material in line with global standards that shall provide respectful, simple, affordable, quality and evidence-based care that will guarantee improved quality of life for women and girls living with obstetric fistula including women with fistula deemed inoperable.

1.2 GOALS

The goals of this document are to:

i. Provide a global standard, user friendly training manual for doctors to provide holistic, respectful, simple, affordable, quality and evidence-based care that will guarantee improved quality of life for women and girls living with genital fistula.
ii. Accelerate human resource development of fistula surgeons and caregivers that will provide fistula services to all women and girls living with genital fistula at all levels of health care delivery.

1.3 PURPOSE AND SPECIFIC OBJECTIVES

The purpose of this manual is to provide a document that will serve as a guide for clinical care of fistula patients in Nigeria.

The intention is to share experiences, train on standardised Obstetric Fistula management based on current scientific advancement and global health realities in the light of evidence based best practices in the clinical management of female genital fistula, that guarantees quality service in a manner that is respectful, safe, simple and affordable in the context of a low resource economy.

The topics covered were harmonised with the 2022 FIGO global fistula training manual [3] ranging from overview of obstetric fistula, magnitude of the problem, surgical management of the fistula clients including simple and complicated fistulae. Issues related to fistula deemed inoperable were also featured. The draft was reviewed and validated at technical review meetings by stakeholders. The Consultants harmonised and finalised inputs from these reviews to produce the final document.

Specific Objectives

- To collate and review experiences and published materials on training of doctors on female genital fistula.
- To document and share the findings of the review of experiences and published materials on training of doctors in management of female genital fistula.
- Develop a simple and standard training manual for managing female genital fistula.

Chapter 2 OVERVIEW OF OBSTETRIC FISTULA

2.1 DEFINITION

Obstetric fistula is a type of female genital fistula that results from the process of delivery. Fistula is an abnormal communication between two body cavities or two epithelial surfaces. Obstetric fistula can be defined as an abnormal communication between the female genital tract and the lower urinary tract forming the urogenital fistula with consequent leakage of urine through the vagina; and / or the lower gastro-intestinal tract forming the faecal genital fistula, which allows leakage of faeces through the vagina. The most common female genital fistula is the vesico-vaginal fistula.

2.2 HISTORICAL BACKGROUND

The history of obstetric fistula goes back to primitive human history, as long as childbirth and obstructed labour have occurred. Obstetric fistula was described in an Egyptian Mummy from a royal family as far back as 2000 BC. Before the 17th Century, VVF was considered irreparable and attention was devoted only to devising receptacles for collecting urine. It was not until 1666 that Hendrick Van Roonhuyse first described VVF repair.

George Hayward of Boston, in 1839, described separating the bladder from the vagina. This was a major technical breakthrough in the repair of vesico-vaginal fistula, and is still practised today as the flap splitting dissection in standard repair of vesico-vaginal fistula.

James Marion Sims, is considered the father of fistula repair, regardless of recent critiques. He was credited with publishing an article on the treatment of VVF in 1852 and establishing the first VVF hospital in New York in the year 1860.

The transvesical approach for VVF repair was first described by Trendelenburg in 1881, while Pawlik recommended ureteric catheterization during fistula repair in 1882. Shortly after, the German Surgeon, Dittel, described the transabdominal approach to VVF repair in 1883. Martius later described the use of labial fat graft in VVF repair in the year 1928. The first fistula hospital in Africa (second in the world) was founded by Drs. Catherine and Reginald Hamlin in 1972 in Addis Ababa, Ethiopia.

In Nigeria, Dr. Ann Ward of the Medical Missionaries of Mary in Akwa Ibom State, started work on VVF in the early 50s and championed extensive work on VVF in Southern Nigeria. Majekodumi (Lagos) and Lawson (Ibadan) in the 60s did some work on VVF. Lawson worked on over 350 patients. Prof. Oladosu Ojengbende later built on Lawson's work by ensuring the establishment of a genitourinary unit at the Obstetrics and Gynaecology Department, University of Ibadan/University College Hospital, Ibadan for the training of fistula surgeons. Una Lister worked extensively on VVF patients in Northern Nigeria. Dr. Kees Waaldijk, in 1984, started the National VVF Repair Project which eventually extended to several centres in Nigeria.

Female genital fistula services remained only in the health system in Nigeria until the early 90s, when the National Council of Women Societies (NCWS) Task Force on VVF under the leadership of Dr. Amina Sambo, looked at the multi-dimensional factors associated with VVF. This Task Force later metamorphosed to what is now the National Foundation on VVF (NFVVF). The NCWS and the NFVVF spearheaded strategies to address the many factors associated with VVF and the plight of women living with urinary incontinence. The Task Force on VVF was instrumental to subsequent training of health workers (surgeons and nurses) in VVF management in the 90s and early 2000s.

United Nations Population Fund (UNFPA) in 2003 championed the global campaign to end fistula and facilitated the development of the National Strategic Framework and Plan for eradication of VVF in Nigeria. UNFPA also conducted the first ever, fistula fortnight in 2005, where over 500 women and girls with obstetric fistula were surgically repaired in five centres (Kano, Katsina, Sokoto, Kaduna and Kebbi States).

The International Society of Obstetric Fistula Surgeons (ISOFS) was founded in Addis Ababa Fistula Hospital in 2008. Drs. Kees Waaldijk and Associate Professor Sunday Lengmang from Nigeria attended the inaugural meeting and were among the founding members of ISOFS. Dr. Catherine Hamlin, the co-Founder of Addis Ababa Fistula Hospital was the Foundation President of ISOFS while Dr. Kees was the first Vice president and later became the President of ISOFS. Professor Oladosu Ojengbede was later made Vice President in 2016 . During his tenure, Nigeria hosted the ISOFS conference in Abuja. At the end of the conference, Professor Ojengbede became president of ISOFS while Professor Sunday Adeoye emerged as Executive Secretary of ISOFS in 2018.

To improve the effectiveness and efficiency of fistula services in Nigeria, the Federal Government established zonal Fistula Hospitals of excellence in female genital fistula management and research. The first National Obstetric Fistula Centre was established in Abakaliki, Ebonyi State in 2011, followed by the National Obstetric Fistula Centre Babbar-Ruga, Katsina state in 2013, and the National Obstetric Fistula Centre Ningi, Bauchi State, in 2013. The Federal Ministry of Health and Social Welfare is working with State governments and Partners to establish additional National Obstetric Fistula Centres in the remaining geo-political zones.

The National Obstetric Fistula technical working group was also established by the Federal Ministry of Health and Social Welfare to bring the various actors who continue to provide quality technical input to fistula management and programming issues in Nigeria. The working group met quarterly to share data and review fistula management services in Nigeria, the COVID-19 pandemic slowed down physical contact meetings and introduced virtual meetings.

The United Nations commemorated the first International Day to End Obstetric Fistula on May 23, 2013, for awareness raising and mobilisation of support around the globe on Obstetric Fistula. Various partners who are committed to ending fistula observe this day annually around the world. The 2020 UN Resolution on Fistula called on every fistula-affected nation to end fistula by 2030.[4]

2.3 MAGNITUDE OF THE PROBLEM

Nigeria bears the highest burden of obstetric fistula in the world with an estimated prevalence of 114,048[1]; and an estimated 12,000 new cases annually.[2] Although the prevalence and incidence of obstetric fistula has been on the decline over the years, it is disheartening that the rate of repair lags behind the desire to end fistula in a generation. At the highest rate of repair ever recorded in Nigeria, 5,000 repairs were done in a year, it will take about 30 years to surgically operate the backlog of cases assuming there are no new cases.

2.4 PROFILE OF THE OBSTETRIC FISTULA CLIENT

Generally, the obstetric fistula patient is often poor, uneducated, unhappy and abandoned. The disease takes away their dignity and is often associated with great psychological burden. Other associated problems may include infertility, menstrual disturbance, dyspareunia /apareunia, difficulty in walking etc; with some often resorting to begging and cheap prostitution for livelihood.[5, 6]

Generally, victims often end up destitute if incontinence is not relieved. They are socially, mentally, emotionally and sometimes physically challenged. The condition is also associated with a high foetal wastage rate of about 96%, leaving victims in a profound state of despair from childlessness, incontinence and abandonment. [5,6]

While this profile persists, there appears to be an emerging profile of fistula women who are from urban areas in their mid-thirties and forties, educated, retain their husbands and continue to work in spite of their fistula presenting with iatrogenic fistula mainly from pelvic surgeries like Caesarean delivery or hysterectomy.[7]

In Northern Nigeria, 70% of the patients are below the age of 20 years when they develop fistula; while in Southern Nigeria, older women are affected. [5]

2.5 NATIONAL STRATEGIC FRAMEWORK FOR ELIMINATION OF OBSTETRIC FISTULA

The fistula surgeons and trainees should be familiar with contents of the National Strategic Framework for the elimination of VVF in Nigeria (2025-2030). The framework's strategic approaches include: enhance policy and governance; quality of maternal care; strengthen community education and awareness; access to timely surgical care; address socio-economic determinants; strengthen coordination and collaboration; improve financial accessibility; research and innovation; engagement of men and boys; and data generation including monitoring and evaluation. The treatment priority area targets a 50% reduction of the backlog of women and girls with genital fistula in Nigeria by: expanding the national and state treatment centres; promoting mandatory rotation of OB GYN resident doctors to fistula centres; increasing the number of fistula repairs; expanding the use of catheterization for early management of obstetric fistula; developing system of classification of fistula surgery and a system of referral of complex fistula cases to experienced surgeons; providing standardised basic and specialist training for doctors, nurses and other health professionals in OF prevention and management; and instituting a system of quality assurance of OF treatment centres among others. This training manual addresses many of these key activities.

2.6 PUBLIC HEALTH VIEW OF OBSTETRIC FISTULA

In Nigeria, Obstetric Fistula is a major public health concern that requires specialised units and personnel for treatment and prevention. The Public Health Strategy should include creating awareness among patients on their rights to adequate obstetric care and addressing issues of access to care like:

- Improving various modalities that can facilitate access to maternal care for pregnant women;
- Provision of functional health care facilities where emergency obstetric care can be accessed;
- Development of road network and emphasis on girl and boy child education as important tools for the prevention of obstetric fistula;
- Community microfinancing of health to help support access to healthcare in the community.

Maternal health advocates should be encouraged to refer all pregnant women to Skilled Attendants for childbirths. According to the USA National Vital Statistics, there were 171,674 child births by teenage mothers in 2019. However, there was no single obstetric fistula.

Overall, the focus on improving obstetric care should be the hallmark of strategies to prevent obstetric fistula. It is the collective responsibility of government at all levels, civil society, NGOs, and communities to ensure that obstetric fistula is eradicated from Nigeria using a multi-faceted approach.

Chapter 3 PATHOLOGY OF OBSTETRIC FISTULA AND OTHER FORMS OF FEMALE GENITAL FISTULA

3.1 BASIC SCIENCES RELATED TO OBSTETRIC FISTULA

The fistula surgeon should be very conversant with anatomy of the pelvis, particularly the bony pelvis. The female bony pelvis is made up of the sacrum, the coccyx on the posterior aspect, and three pairs of bones – ileum, ischium and pubis forming the lateral and anterior portion. This bony framework forms the wider pelvic inlet and narrower outlet through which the baby rotates to descend through the passage. Thus, fistula surgeons should also be conversant with the various types of the female pelvis that exist such as gynaecoid, android, anthropoid and platypelloid; and their relevance to childbirth. Any factor contributing to an abnormality in the pelvis (e.g., Rickets, undernutrition) the uterus or baby (e.g., Cephalopelvic disproportion, macrocephaly) could lead to an arrest of descent of the baby (obstructed labour), a predominant cause of obstetric fistula. Also, the anatomy of the intrapelvic structures including their vasculature and innervations and of the perineum should be known. Similarly, one must also be familiar with the basic physiology of micturition (urination), defaecation, continence mechanism of stool and urine in the female and the physiology of menstruation. These would enhance understanding of the aetio-pathogenesis of obstetric fistula.

3.2 CAUSES OF OBSTETRIC FISTULA AND OTHER FORMS OF FEMALE GENITAL FISTULA

3.2.1 Direct Causes of Female Genital Fistula

i. Prolonged obstructed labour (major cause)
ii. Injury to the bladder, and/or rectum during Caesarean section and other gynaecological operations or interventions
iii. Instrumental vaginal delivery like use of obstetric forceps and destructive operations on the dead foetus in the uterus.
iv. Direct fall on a sharp object or during road traffic accident
v. Symphysiotomy
vi. Harmful traditional practices like FGM such as “yankan gishiri” or other traditional practices which involves application of douching with harmful chemical solutions
vii. Rape
viii. Coital Injuries

3.2.2 Other Causes of Female Genital Fistula

i. Foreign bodies
   a. Insertion of caustic salt and paste, etc
   b. Insertion of sexual toys
ii. Infections
   a. Granulomatous infections like lymphogranuloma venereum
   b. HIV
   c. Tuberculosis
iii. Tumours:
   a. Advanced cancer of the cervix
   b. Advanced cancer of the bladder
iv. Radiotherapy

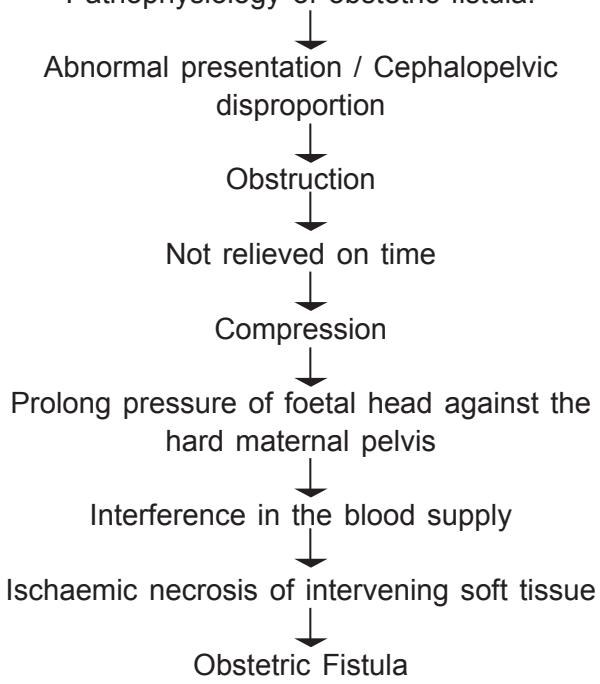
3.2.3 Indirect Causes of Female Genital Fistula

i. Poverty
ii. Illiteracy and ignorance
iii. Poor infrastructure
iv. Poor obstetric care
v. Industrial strike
vi. Cultural or religious beliefs and practices such as early pregnancy
vii. Malnutrition, particularly in children
viii. Insurgency and displacement

3.3 PATHOLOGY AND PATHOPHYSIOLOGY

Following prolonged obstructed labour, pressure by the foetal presenting part on the vagina, bladder / urethra, rectum and pelvic nerves, in between, against the bony pelvis results in necrosis of the soft tissue involved causing VVF, RVF and obstetric palsy.

Figure 1:
Pathophysiology of obstetric fistula:



3.4 CLASSIFICATION

3.4.1 Urogenital Fistula

i. The anatomical position of the fistula could be described as:-

- Juxta-urethral (JU)
- Juxta-cervical (JC)
- Mid-vaginal (MV)
- Combined
- Vault

ii. The size of the fistula could be described as:-

- Small <2 cm in diameter
- Medium 2-3 cm
- Large 4-5cm
- Extensive >6cm in diameter

iii. Urethral or involvement of the continence mechanism (physiological outcome: Revised Kees Classification 1995)

1. Fistula not involving the continence mechanism
2. Fistula Involving the urethral closing mechanism
   A. Without (sub) total urethral involvement
   B. With (sub) total involvement
      a. without circumferential defect
      b. with circumferential defect
3. Ureteric fistula and other exceptional fistulas

3.4.2 Faeco-genital Fistula (Recto-vaginal Fistula (RVF))

I. Anatomical position of the fistula could be described as:

a. Upper RVF
b. Lower RVF

Demarcation is the pubo-rectalis muscle.

II. Size of the fistula could be described as:
   i. Small <2 cm in diameter
   ii. Medium 2-3 cm
   iii. Large 4-5cm
   iv. Extensive >6cm in diameter

III. Involvement of the anal Sphincter
(Any of the rectovaginal fistulae with involvement of the anal sphincter). Check the complete classification A&B).

3.4.3 Classification Based on Ease of Repair and Repair Outcome

Female genital fistula can also be classified based on the ease of repair and the anticipated outcome into simple (easy to repair and good prognosis) and complex/ difficult (complicated and uncertain prognosis) fistulas.

Table 1

Criteria based on the degree of anticipated ease of repair (WHO Criteria)		
Characteristic of fistula	**Simple**	**Complex**
Site	Mid vaginal VVF	Rectovaginal (RVF), Mixed VVF /RVF Involvement of cervix
Size	<4cm	>4cm
Involvement of the urethra / continence mechanism	Absent	Present
Scarring of the vaginal tissue	Absent	Present
Presence of circumferential defect*	Absent	Present
Degree of tissue loss	Minimal	Extensive
Ureter/bladder involvement	Ureters are inside the bladder, not draining into the vagina	Ureters are draining into the vagina; bladder may have stones
Number of attempts at repair	No previous attempt	Failed previous attempts at repair

*Complete separation of urethra from bladder. Adopted from Obstetric Fistula and Other Forms of Female Genital Fistula: Guiding principles for clinical management and programme development (UNFPA, 2020)

3.4.4 Classification based on difficulty of cases for the different levels of training

Table 2

CLASSIFICATION OF FEMALE GENITAL FISTULA BASED ON EASE OF IDENTIFICATION OF TYPES OF FISTULA FOR THE THREE LEVELS OF TRAINING (LENGMANG SJ - UNPUBLISHED)		
DIRECT FISTULA (Fistula seen on direct genital exam)	**INDIRECT FISTULA (Fistula not seen on direct genital exam)**	**SPECIAL FISTULA & RELATED COMPLICATIONS**
Direct simple fistula	Intra-cervical (vesico-cervical) fistula	Ureteric fistula (uretero-cervical fistula)
MV	Vesico-Uterine Fistula	Extensive Fistula requiring flaps or grafts
JC	Entero-Uterine Fistula	Complete Urethral loss
JU		Fistula with severe fibrosis
RVF		Fistula with severe vaginal stenosis
PERINEAL TEAR		Genital Fistula following radiotherapy
Direct complex fistula		Paediatric congenital fistula
Pinhole		Uretero-appendiceal fistula
Circumferential fistula		Uretero-cutaneous fistula
Vault Fistula		Fistula deemed inoperable
Fistula+bladder stone		Post closure incontinence
Multiple Fistula		Vaginal stenosis (bahanya)
Fistula+Moderate fibrosis		
Fistula+ureter outside the fistula		
Lungu fistula (around the corner fistula)		
RVF with stricture		
Circumferential RVF		

3.4.5 Other Classifications

Goh classification, Tafesse classification, FIGO Classification and others exist.

The fact that numerous classifications exist suggest that it is difficult to have one standard criteria that addresses all the issues concerned and that fistulae vary so much and findings could be subjective. Whereas some classifications are mainly descriptive based on the location of the fistula, others mainly refer to the complexity of the fistula and ease of selection for training at different levels; others refer to expected outcome of surgery and prognosis. It is therefore difficult to use only one classification. It is therefore recommended that each fistula is well described so as to make it easier to fit into any preferred classification system.

3.5 PREVENTION OF OBSTETRIC FISTULA

Prevention of OF are actions aimed at eliminating OF from occurring and includes actions at minimising the impact of genital fistula and its associated disabilities when it has occurred.

Prevention of OF has four main components as shown in table 3 below:

Table 3

Levels of Prevention		
Types	**Timing**	**Target**
Primordial Prevention	Underlying Condition leading to causation	Total population / selected groups
Primary Prevention	Specific causal factor	Total population / selected groups / Individuals
Secondary Prevention	Early stage of disease	Patients
Tertiary Prevention	Late stage of disease (treatment and rehabilitation)	Patients

3.5.1 Primordial Prevention

- Childhood and women nutrition
- Formal education particularly for the girl child and women

- Planning for all pregnancies by use of appropriate contraceptive(s)
- Delaying the age of first pregnancy
- Birth spacing and easy access to family planning information and services
- Overcoming cultural barriers that subjugate women
- Peace and stability for easy access to healthcare

3.5.2 Primary Prevention
- Functional prenatal care
- Birth preparedness and complication readiness
- Knowledge and identification of possible problems (danger signs) during pregnancy and childbirth
- Skilled professional attendant at birth
- Easy access to basic and comprehensive emergency obstetric care
- Consistent use of Labour Care Guide for monitoring of labour
- Easy and quick means of referral when problems arise in labour
- Use of indwelling Foley's catheter for 7 to 14 days or longer for women who had obstructed labour.

3.5.3 Secondary Prevention

These are designed to identify fistula early and provide immediate conservative and / or active early surgical treatment of fistula.
- Knowledge and identification of symptoms and signs of fistula.
- Immediate use of Foley's catheter for all women who developed fistula after obstructed labour or surgery.
- Quick and easy access to centres with capability for fistula treatment.
- Identify and reach women with fistula and mobilise for early treatment.

3.5.4 Tertiary Prevention

The major goal is to improve the quality of life.
- Effective surgical treatment and the prevention of complications.
- Physiotherapy for pelvic floor and foot drop.
- Rehabilitation and social reintegration.

3.5.5 Community Involvement and Advocacy

Women living with fistula very often suffer stigmatisation and discrimination, and sometimes become social outcasts.
- Empowering women, men and communities towards safe motherhood
- Advocacy for free or subsidised ANC and obstetric care
- Information on availability of fistula treatment services
- Advocacy at all levels of government and leadership on the problems of unsafe motherhood, including fistula
- Promoting fistula awareness, prevention and treatment.
- Develop and implement national and subnational action plans to eradicate obstetric fistula.
- Human rights and legislations: To protect the fundamental human right of women (right to life, education, health and self-determination).

The pre-operative care of women and girls with genital fistula is critical to the success of their surgical management. Furthermore, for the fact that many of the women and girls with genital fistula access the health system for the first time during such encounters, it is important that they have a very thorough general health assessment. Their management requires a thorough history, complete physical examination and investigations so as to make a good diagnosis of the fistula condition and of other co-morbid conditions.

Chapter 4 PREOPERATIVE CARE OF OBSTETRIC FISTULA PATIENTS

4.1 DIAGNOSIS OF OBSTETRIC FISTULA (MEDICAL AND SOCIAL EVALUATION)

4.1.1 History

A detailed history must be taken which includes:

i. Bio data:

This should include: name, age, parity, last child birth, address, telephone number, if any, local government area / state of origin, religion, ethnic group, marital status, age at marriage, educational status / occupation including the husband's educational status and occupation; age at menarche, date of last menstrual period.

ii. Presenting complaint and duration of the problem

iii. History of presenting complaint [should include labour events preceding the fistula], duration of labour and where it occurred.

- Mode of delivery
- How soon after delivery did the leakage start?
- Foetal outcome
- If there was delay in accessing health care, enquire for reasons for the delay
- Is the patient able to escape per urethra despite leakage?
- Other associated morbidities such as recto-vaginal fistula, gait abnormality, amenorrhoea, pain or difficulty with intercourse or absence of sexual activity.
- Any treatment so far: orthodox and unorthodox or both.
- What has been the source of support since the illness. Is there any associated marital disharmony due to the ailment?

4.1.2 Physical Examination

- General examination to include: height, weight, gait foot drop, pallor, jaundice, pedal oedema, lymphadenopathy, decubitus ulcer.
- Cardiovascular system – pulse rate, blood pressure, and heart sounds
- Respiratory system – respiratory rate; listen to the chest for abnormal breath sounds.
- The abdomen- Scar, tenderness, masses, fluids
- Vaginal examination: Follow inspection and palpation principles. Start with the patient in the dorsal position and then the left lateral position during examination with the speculum.
  - Inspection of the vagina involves both direct visualisation and the use of the speculum
  - Inspect for wetness of the buttocks or wrappers, rashes or ulcers on the buttocks. Look for urine coming through the urethra.
  - Test for stress incontinence by asking the patient to cough). The test is interpreted as positive with urine coming through the urethra. Confirm true urinary incontinence and exclude it from stress incontinence and other forms of urinary incontinence. If no obvious fistula is seen, do a dye test.
  - Digital examination should also be done in this position to determine the degree of gynaetresia and to choose the appropriately sized Sims's speculum.
  - During digital examination note the size, number, site of fistula and degree of scarring or fibrosis. At examination with the speculum: the site, size and number of fistulae should be noted.

If a fistula is not obviously demonstrable at this stage, it may be likely that a urethrovaginal fistula or stress incontinence, a minute VVF or even a vesico-cervical fistula may be present. A bladder dye test may be necessary to facilitate diagnosis.

4.1.3 Direct Dye Test

It is a test done when an obvious fistula is not seen on speculum examination. As much as 180mls of diluted methylene blue or gentian violet should be instilled into the bladder while blocking the external urethra opening with a gauze to prevent leakage. It is positive when dye is seen in the vagina.

Interpretation:

Positive test indicates a vesico-vaginal fistula, vesico-cervical or vesico-uterine fistula.

Negative test indicates a very small VVF or ureteric fistula. A clean urine coming through the cervical os confirms a ureteric fistula. However, a swab test is worth doing for further evaluation.

4.1.4 Three Swab Test

180mls of dye is instilled into the bladder and then the catheter is removed. Then, 2 to 3 swabs or gauze are placed into the vagina. Then the patient is ask to walk around for 30 minutes.[2]

Interpretation:
Swabs wet but not stained= ureteric fistula or congenital fistula

Inner swabs stained with dye indicate a VVF while stress inconvenience is suspected if the outer swab alone is stained with dye.

Neurological examination using the Medical Research Council (MRC) Scale is necessary especially when there is foot drop or a fresh fistula. Anal reflex and Musculo-skeletal system should also be examined.

4.1.4 Three Swab Test
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4.1.5 Investigations
A minimum number of tests should be encouraged as much as possible to reduce the cost of healthcare.

Tests that can be done include but not limited to pregnancy test, haemoglobin estimation (or packed cell volume), blood group and HIV test. Should urinalysis be done, special consideration for urine sample collection must be made in order to avoid contamination from the vagina.[2]

Specific investigations such as upper urinary tract sonography, urinary tract contrast study (intravenous urography and cystoscopy), and urodynamic studies may be indicated in certain cases.

Examination under Anaesthesia (EUA): - Considering the cost and the risk of EUA, it is suggested that examination without anaesthesia in the lithotomy position be considered.

Indications for surgery: as soon as the fistula is clean and inflammatory processes have abated and there are no other concurrent medical morbidities, surgical repair can be done. There should be a nutritional evaluation of the patient on presentation and strategies to build up the patient nutritionally before surgery.

Where the patient is sexually active, rule out the presence of pregnancy.

4.2 PRE-OPERATIVE CARE

4.2.1 Counselling
Counsel the patient and her family and obtain consent for care.

Admission procedure

The patient comes some days before surgery for nutritional evaluation and rehabilitation. If there is malnutrition it should be corrected before surgery is performed.

Every OF patient should undergo normal preoperative admission procedure which will include repeat clerking, physical examination and laboratory investigations if the preceding evaluation was more than two weeks.

4.2.2 Orientation
Introduce the patient to other patients. Familiarise them with the hospital environment and facilities to be used such as toilets and bathrooms.

4.2.3 Bowel Preparation
The patient's last meal should be before 10.00pm (8 hours before surgery) and enema early in the morning of the surgery to clear the rectum. This should be done with caution for patients with rectovaginal fistula. For patients with RVF, bowel preparation should commence at least three days before surgery in the form of liquid diet and may include gut sterilisation with oral antibiotics.

4.2.4 Movement to the Theatre
Movement to the theatre should be by stretcher or wheelchair, but must be by stretcher when returning back from the theatre.

4.2.5 Preoperative Antibiotic(s)
This may not be indicated as routine for OF patients, however global standard requires a single dose of antibiotics for every pelvic or abdominal surgery before the first incision is made.

4.2.6 Body Preparation
Early morning bath on the day of the surgery. Movement to the theatre: Patients should be conveyed to the theatre on a trolley or wheel chair but returned to the ward after the surgery on a trolley.

4.2.7 Patient with HIV/AIDS
It is not uncommon to find women with fistula testing positive for HIV. Therefore, all fistula patients should be offered HIV screening, as this may be their only opportunity for accessing the service. In screening patients for HIV, follow the standard procedure of HIV testing and counselling. Those found positive should be offered the appropriate care. No fistula patient should be denied surgery or care for reason for their status unless they are not physically fit for the procedure.

4.3 PHYSIOTHERAPY

Situations that may require physical therapy include foot drop from obstetric palsy (from injury to the nerves of the sacral plexus), overflow incontinence from urinary retention due to atonic bladder, faecal incontinence from weak anal sphincter etc. For these reasons, it is advised that a physiotherapist be part of the obstetric fistula treatment team.
The basic physical therapy of some of these conditions include:

4.3.1 Foot Drop
Encourage early ambulation and physiotherapy. Show patients how to dorsiflex foot passively and at intervals.

4.3.2 Atonic Bladder
Should be catheterized and drained for at least 2 weeks followed by bladder training: (a) Spigotting, and (b) frequent micturition.

[Anticholinergic e.g., tolterodine, oxybutynin is used in the medical management in the treatment of atonic bladder].

4.3.3 Weak Anal Sphincter
Do pelvic floor muscle exercise. Teach patients how this is done (4.3.5.)

4.3.4 Unstable Bladder
Make efforts to determine the cause of the irritable bladder such as stone, urinary tract infections and very small bladder. If intractable case, refer for urodynamic studies.

4.3.5 Pelvic Floor Exercise
Since the American Gynaecologist, Arnold Kegel, first described and published pelvic floor exercise in 1948, several versions of the exercise have been described and has been said to be useful for women and men. Pelvic floor exercise is sometimes called Kegel's exercise.

The exercise aims to strengthen pelvic floor muscles. In women, the pelvic floor muscles help in holding up the bladder, so the exercise can help in preventing urinary stress incontinence, vaginal and uterine prolapse.

The exercise can be done by squeezing the pelvic floor muscles, as quickly and as hard, for about 10 seconds, followed by complete relaxation for about 10 seconds. This is done 45 times daily, divided into three sessions to prevent muscle fatigue. The exercise can initially be done by first lying down, then sitting and then standing.
While doing the exercise, ensure to breathe normally and avoid increasing the intra-abdominal or pelvic pressure which can lead to a counterproductive effect.

Chapter 5 SURGICAL TREATMENT OF OBSTETRIC FISTULA

5.1 ANAESTHESIA

Anaesthesia is the administration of drugs which desensitises part or the whole body for the benefit of carrying out a surgical /medical intervention.

Good anaesthesia begins from pre-anaesthetic evaluation of the patient on the ward, at least one day before surgery for elective cases. The patient is screened and evaluated for fitness for anaesthesia and surgery. A decision is made about the preferred form of anaesthesia and discussed with the patient (anaesthetic counselling). An informed consent for anaesthesia and surgery should be obtained in the ward, before the day of surgery.

It is good practice for the entire team to meet on the day of the surgery to discuss the operation list. The surgeon, anaesthetist and perioperative nurse all discuss what they intend to do for each patient on the list and expectations are shared and issues clarified. Concerns from all parties participating in the surgery are brought and dealt with as a team before starting the surgical list.

At least a nurse anaesthetist must be present during anaesthesia. However, the surgeon should be familiar with the procedures of administering spinal anaesthesia, and should be present too while the anaesthesia is being administered to provide assistance where needed.

In situations where the surgeon administered the spinal anaesthesia, the Nurse Anaesthetist must be present to monitor the patient during surgery and immediate postoperative period.

The anaesthetist should regularly monitor the vital signs intra-operatively and record such in an anaesthetic chart.

For Spinal anaesthesia, preload patients with 1-2 litres of intravenous fluid (preferably Ringer's lactate solution or normal saline) before the spinal anaesthesia. Pre-operative preload of patients improves safety of spinal anaesthesia and is very useful for the surgeon as it makes it easier to see the ureteric opening with the constant spillage of urine into the bladder.

Take the vital signs and document before anaesthesia and at regular intervals.

Drugs that should be available in the theatre include;

- Bupivacaine 0.5% (heavy Marcaine)
- Lignocaine
- Pentazocine
- Promethazine
- Atropine
- Hydrocortisone
- Adrenaline
- Ephedrine
- Ketamine
- Intravenous fluid (Ringer's lactate, Normal saline, 5% dextrose in water)

5.1.1 Types of Anaesthesia for female genital procedures

In most cases, spinal anaesthesia is recommended but in some instances, dissociative anaesthesia with Ketamine or general anaesthesia may be indicated.

The following minimum anaesthetic equipment are required: -

1. Ambu Bag and or bag-valve mask
2. Oxygen
3. Cuffed endotracheal tubes
4. Laryngoscopes with good batteries
5. Intravenous infusion and blood giving sets
6. Intravenous cannulas (preferably sizes 18G to 14G)
7. Syringes and Needles (Syringes sizes 2mls, 5mls, 10mls and 20mls)

Post-operative Anaesthetic Recovery Care:
Patients should be observed for 15-30 minutes in the recovery room after surgery. During this time, check vital signs and the patient's level of consciousness regularly.

Possible complications of spinal anaesthesia: -

- Headache and vomiting
- Backache
- Hypotension and total spinal shock
- Spinal anaesthesia wearing off before the end of surgery

Prevention of complications of spinal anaesthesia:

- Use fine spinal needles 23G or 22G and heavy Marcaine at spinal position L3 to L5.
- Keep the patient's head elevated with a pillow for at least 20 minutes after spinal anaesthesia. The dose of spinal anaesthesia administered should be relative to the patient's weight.
- Failed spinal anaesthesia. Do not repeat the spinal anaesthesia soon after the initial dose has failed. Use alternative technique of anaesthesia for safety.
- A patient who is given sufficient intravenous fluid at the preloading stage is unlikely to develop hypotension. However, if the patient develops hypotension or shock, give normal saline fast to elevate the blood pressure and thereafter, maintain the blood pressure with the same fluid. If available, administer ephedrine intravenously.
- For a patient who is vomiting during anaesthesia, give promethazine and turn the patient's head sideways.

5.1.2 Counselling and Pre-operative Review
This prepares the patient on the nature of the anaesthesia/procedure, further reviews and monitoring of vital signs. The patient should be reassured to allay anxiety.

5.1.3 Fasting

- No pre-medication unless necessary.
- No food a night before surgery, oral fluids should be encouraged.

5.1.4 Nursing Intervention for Anaesthetic Care

- Vital signs (TPR, B/P).
- Reassure the patient.

5.2 PERI-OPERATIVE CARE

- The operating room should be set to the average standard.
- There must be a gynaecological hydraulic table that is adjustable with stirrups for leg support.
- There should be provision for shoulder support to allow for tilting the head down during surgery without risking the patient slipping backwards.
- There should also be a standard operating outfit and towels, drapes and leggings.

5.2.1 Lighting
The theatre should have access to good and adequate natural lighting. In addition, an electrical light source with a battery controlled powered headlamp is an added advantage where electricity is not constantly available.

5.2.2 Water Supply and Scrub Area

- Adequate water supply with running water for scrubbing should always be available in the scrub area.
- Theatre outfits and towels/drapes, gowns, towels - should be sterilised.
- Operating Instruments and Supplies.
- Autoclave and sterilisation equipment including other instruments required (see Appendix 1 and 2).

5.2.3 Provision of Secretariat
Data collection is important to evaluate the result, compare them with other centres, and for research work. Efforts should be made to capture data of all patients (see section 5.7).

5.2.4 Human Resources
The minimum number of human resources needed for standard care in the operating room during obstetric fistula surgery include:

i. A surgeon,
ii. A scrub nurse,
iii. A circulating nurse,
iv. A theatre attendant and,
v. An anaesthetist.

5.2.5 Field Exposure
Provide adequate exposure of the operation site and focus light directly on the exposed area. Drape the site of the operation.

5.2.6 Patient Positioning and Routes of Repair
Trans-vaginal repair: The nurse positions the patient on the operation table as mentioned above and ensures that the instruments are placed appropriately for vaginal surgery.

Trans-abdominal repair: The nurse stays on the right and the instruments should be as for abdominal surgeries.

5.2.7 Team Position
The assistant nurse should be by the right hand of the surgeon and other team members should take other positions.

5.2.8 Transfer of Patient to the Ward
Patients should be kept in the recovery room or a post-operative bed between 30 minutes to 1 hour for observation of vital signs, and monitoring of urine output to ensure that the catheter is draining well.

The patient must be on intravenous fluids, but this depends on the patient's condition.

5.3 INSTRUMENTS

1. Trolley for placement of instruments (2)
2. Sponge forceps for disinfecting operation area (2)
3. Pair of sharply curved Thorek Scissors
4. Sims's speculum double ended medium
5. Sims's speculum double ended large
6. Langenbeck retractor modified 3.5cm x 1.5cm
7. Auvard weighted speculum large
8. Lawrence needle holder light weight
9. Mayo Hegar needle holder Tungsten carbide
10. Kelly artery forceps straight (16cm)
11. Mosquito artery forceps straight (12.5cm)
12. Mosquito artery forceps curved (12.5cm)
13. Grille artery forceps straight (16cm)
14. Female metal catheter FG12, 3cm Gauge 1
15. Female metal catheter FG16, 3cm Gauge 1
16. Mayo chambered scissors straight (16.5cm)
17. Kocher artery forceps straight (20cm)
18. Kocher artery forceps straight (18cm)
19. Littlewoods Tissue forceps (18.5cm)
20. Judd Allis Tissue forceps (19.5cm) [3 to 4 pieces]
21. Silver Probe with eye (15cm)
22. Silver Probe with eye (12.5 cm)
23. McIndoe dissecting forceps (15cm)
24. McIndoe dissecting forceps toothed 1:2 (15cm)
25. McIndoe's scissors curved (18cm)
26. Boyd scissors semi sharp (18cm) (slight double curve)
27. Kelly artery forceps (curved) (16cm)
28. Pair of slightly curved long dissecting scissors
29. Pair of curved scissors to cut sutures (2)
30. Sharp Descamps Aneurysm Needle
31. Slender Allis Clamps (4)
32. Robust Needle Holder
33. Slender toothed tissue forceps
34. Calibrated (up to 25 cm) uterine sound
35. Set of metal dilators from #3 through #16
36. Metal bladder flushing syringe of at least 50-100ml
37. Metal kidney bowls for pre- and post-operative use.
38. OTIS urethrotome

The theatre should have adequate Operating Pack (OP) of instruments to be used in each repair (each patient should have her pack) to reduce the spread of HIV/AIDS and other infections.

5.4 CONSERVATIVE MANAGEMENT

According to the national urethral catheterisation guideline [5], conservative management of obstetric fistula by the insertion of catheter should be recommended for the following:

i. Occurrence of fistula injury within 4 weeks

ii. Fistula size is not large enough to allow visualisation of the catheter within the vagina.

iii. Fistula from obstetric complications and not radiotherapy, infection, malignancy etc.

The rationale behind is to allow healing of fistula edge by preventing bladder distension. Catheterization for 4 weeks is recommended and antibiotics or any other medication are not recommended unless indicated for other reasons. The success rate of conservative management is estimated at 25%. Moreover, its simplicity reduces the cost of health care drastically and saves the patient from mental and surgical stress.

Liberal fluid intake of 5 litres (i.e. 10 sachets) of clean water is recommended to enhance microbial clearance and prevention of bladder stones.

Catheter insertion however should be aseptic as possible. It is recommended that the balloon be inflated with 10 mls of fluid and catheter connected via an open drainage system for 4 weeks while ensuring that the catheter is changed at two weeks.

Take into account of the rule of fours:

- Fistula size ≤ 4cm
- Injury recovery ≤ 4 weeks
- Catheter inserted for 4 weeks
- Follow up patient for ≥ 4 month after treatment

Discontinue catheter treatment if

- Catheter is seen in the vaginal during insertion or after 24hrs
- Catheter is not draining during insertion or after 24hrs follow-up
- Patient not actively drinking

At 4 weeks follow-up

i. Remove the catheter if the client is dry and well.
ii. Discharge patient after one week follow-up if continence is achieved, otherwise, refer
iii. Adequate counselling of patient should be based on the following during discharge

a) Resumption of sexual intercourse three to six month after treatment
b) The need to visit the clinic in case of problems e.g. urine leakage, pain with micturition
c) Importance of child spacing and available contraceptive methods
d) The need to attend antenatal services in subsequent pregnancies
e) Deliveries of subsequent pregnancies must be via Caesarean section

5.5 BLADDER DRAINAGE

This is a critical part of surgical management of patients with obstetric fistula. Use size 18 self-retaining Foley's catheter to drain the bladder continuously for 14 days (2 weeks). Seven days of drainage is also allowed for simple fistula as suggested by the non – inferiority multi-country study.[8]

For complex fistulas, up to 28 days catheterization may be required. Use 10 mls of fluid to inflate the balloon of the Foley's catheter; unless you are using smaller catheters where you should not exceed the recommended volume stated on the catheter.

Strap the catheter securely over the less dominant thigh. If there was repair that involved the urethra, use a stitch around the labium to anchor the catheter.

5.6 VAGINAL PACKING

At the end of the surgery, wash the vagina with sterile saline or mop dry and pack it with single or knotted pieces of gauze to close the dead space between the bladder and vagina. This will also create pressure to achieve haemostasis.

Where there are raw surfaces in the vagina, the packing can be done with gauze ribbon soaked in acriflavine or sofratulle Vaseline.

5.7 PROVISION FOR SECRETARIAT AND DATA COLLECTION

There should be a standard operation register where the patient's name, age, hospital number, type of OF, type of anaesthesia, the surgeon, assistant / scrub nurse and anaesthetist names, and the date of surgery are entered. Please refer to the FMOHSW standard operation register in the appendix.

Give the patient a hand card at the end of the surgery (or at discharge) detailing the date and type of the operation done. Encourage patients to present the hand card at any health facility that she goes for pregnancy care or labour at subsequent pregnancies.

Chapter 6 POSTOPERATIVE CARE AFTER OBSTETRIC FISTULA REPAIR

6.1 POST OPERATIVE CARE

6.1.1 Immediate Care (First 24 hours)
The first twenty-four hours after surgery require critical observation from the anaesthetist, fistula surgeon and ward nurses to ensure the patient attains stability.

- Observe the patient in the recovery room for about 30 minutes; monitoring their vital signs: breathing, blood pressure, pulse and level of consciousness every 5 minutes.

- When her condition is stable and satisfactory, move her to the ward. Check vital signs ½ hourly for 4 hours and then 4 hourly for the next 16 hours.

- Patients should be reviewed by the surgeon within the first 4-6 hours of surgery.

6.1.2 Post-operative Care during Stable State
Usually the patient will return to the ward with intravenous fluid (IVF) infusion running and that unit may be the last IVF that the patient may have. Thereafter, give liberal fluid orally (5 litres/day), aiming that urine produced is as clear as water.

i. Where a patient cannot tolerate oral fluids because of vomiting during the first 24 hours, give IVF (4 litres), 5% dextrose solution in water to alternate with Normal Saline.
Monitor the serum electrolytes where facilities are available.

ii. Monitor urine output hourly. Urine should be clear as water. Not less than 3000 mls may be produced in 24 hours if the patient drinks enough water as stated above. Give clear instructions on what to be done with the urine output and appearance is below expectation.

iii. Catheter care: this is critical and very important.
   a. Usually size 16 or 18 Fr Foley's catheter is used. The bigger size is better to allow free urine drainage.
   b. The catheter can be anchored by a stitch or held in place with an adhesive strap.
   c. Check catheter drainage and if it is blocked flush or change it.
   d. Make sure the patient does not lie on the catheter or get it kinked. When it is blocked, irrigate it with a normal saline solution using a bladder syringe. Adequate intake of fluid (water) not less than five litres per day keeps the urine clear and cleanses the catheter. Less water intake produces sludge and can clog the catheter.
   e. If urine is cloudy, exclude urinary tract infection. Do urine microscopy and bacteriology where facilities are available or treat empirically with cotrimoxazole or nitrofurantoin and increase the fluid intake.

iv. Give adequate analgesia. A short term non-steroidal anti-inflammatory drug like piroxicam, diclofenac or ibuprofen can be used.

v. Check the patient's bed regularly for vaginal bleeding or wetting.

vi. Allow a regular diet as tolerated by the patient. Adequate and liberal oral water intake and good nutrition is critical and should be encouraged. Where it is a rectal fistula repair, allow a low residue diet like pap or rice and stew and then advance to a regular diet.

Liquid paraffin 15mls daily can soften the stool if there is constipation.

vii. Allow ambulation after the first 24 hours of surgery. Patients can carry the urine bag if using closed drainage. Open drainage can be used where care of urine bag cannot be

optimised. An intravenous fluid giving set is connected to the catheter and the urine is collected in a small plastic container which the patient can empty by herself from time to time.

viii. Drugs. No routine drugs unless clinically indicated. Give haematinics like ferrous sulphate, folic acid, vitamin B complex and vitamin C. If the patient is still wet, use barrier creams (Vaseline) to avoid dermatitis.

Routine antibiotic use is not recommended.

ix. Encourage usual perineal and vaginal hygiene but do not allow deep vaginal douching.

x. Daily bathing, encourage personal hygiene.

xi. Remove Foley's catheter on postoperative day 14. Encourage copious oral fluid intake even after the catheter is removed.

If a patient is still leaking after 2 weeks from a persistent fistula, leave the catheter in situ for another 2 weeks to a maximum of 6 weeks.

xii. Post void residual volumes / bladder scans / passage of catheter / ISC / bladder drill

xiii. Do a dye test before discharging the patient home.

6.2 DISCHARGE PROCEDURE

Pre-discharge counselling of patients should involve the husband and other family members where available. Instructions should be on:

- The presumed cause of the fistula
- Avoiding coital activity for 6 months
- When to return for follow – up care at 4 weeks and 12 weeks. Give specific dates.
- Going to the hospital (not primary health clinic) for antenatal care for all subsequent pregnancies. On arrival, the patient should show her post-operative hand card and insist on seeing a doctor to plan her delivery.
- All subsequent deliveries after fistula repair should be by Caesarean section.
- Manual work may resume after eight weeks.
- Importance of good nutrition to the family, particularly children.
- Advising other women in the neighbourhood of the importance of labour and delivery in a health facility instead of at home.

Give these instructions in plain and simple terms. If the patient cannot understand them all at one session, give the instructions in bits as the patient comes for follow up.

It is important to have the husbands around during the time of instructions for those who are still in cordial marital relationships.

6.3 FOLLOW UP VISITS

At each follow-up visit

- Enquire about leakage of urine, date of last menstrual period if she has resumed menstruation, coital activity and about any other complaint.

- If the visit is not as planned, enquire for the reason for the default.

- Examine patients for leakage, anaemia, gait, abdominal tenderness and swelling. Note presence or use of rags. Examine the perineum, the vagina including a dye test if still leaking.

Encourage the patient, give instruction about diet, coital activity, antenatal care and need for hospital delivery. You may give her haematinics and multivitamin supplements and the date for the next visit.

Chapter 7 INFECTION PREVENTION

7.1 INTRODUCTION

There is need to minimise the spread of pathogenic microorganisms so as to prevent invasion of the body by pathogenic micro-organisms which may lead to the establishment of serious diseases such as hepatitis B and HIV/AIDS, COVID-19 to patients, healthcare providers and support staff including cleaning and housekeeping personnel.

In 1983, the US Centre for Disease Control (CDC) established guidelines for infection control. In 1987, the guideline was revised and renamed "Universal Precautions".

The CDC categorise body fluid into two groups:

i. Blood, serum, vaginal secretions, cerebrospinal fluid (CSF), synovial fluid, pleural fluid, peritoneal and pericardial fluid and Amniotic fluid.
ii. Faeces, nasal secretions, sputum, sweats, urine and vomits.

7.2 PROTECTION GUIDE

- Assume every person is potentially infectious.
- Wear gloves before touching anything wet on /or from the patient.
- Always wear gloves when handling instruments. Make sure gloves are not torn or cracked.
- Use personal protective equipment like barriers, such as gowns, aprons, eye shields or goggles and face masks when working where splashes are anticipated to prevent contact with blood or tissues.
- Dispose of sharp instruments properly.
- Hand washing is the most important procedure in preventing infection. Therefore, wash hands immediately after removing gloves.
- Avoid skin punctures from sharp instruments. Do not touch needles.
- If you have oozing skin lesions, do not have contact with patients or medical instruments until the lesions heal.
- Decontaminate instruments, linen etc before sterilisation or high-level disinfection.

7.3 CLINICS AND WARDS

Infection prevention and control, lessons learned from the COVID-19 pandemic, overcrowding should be avoided in the hospital environment including offices, clinics, wards, hostels and operation rooms. Depending on the need, there should be provision of face masks for all staff and patients. Abundant ventilation should be available in patient waiting areas, alternatively, patients and their relatives could be made to wait in open spaces under canopies or tents to ensure free air circulation.

Observe universal precautions. Facilities offering obstetric fistula surgery must have adequate water supply. Make provision and encourage frequent and regular hand washing in the clinic, ward, theatre and patient's hostel. Encourage patients to adopt hand washing habits at home even after discharge.

In addition, there is the need to sweep, scrub and mop floors and surfaces at least once daily and each time it is soiled. Change linen on beds daily, and each time it is soiled. Use Mackintosh rubber sheet for wet patients to protect the beddings and mattress.

Instruments must never be soaked in low level disinfectants like savlon. They should be high level disinfected and stand dry in a well-covered container and decontaminated as soon as they are used, initiating another cycle of high-level disinfection using 0.5% Chlorine solution. High level disinfection ensures all microorganisms are killed except spores. Other options include boiling, dry or wet sterilisation.

Health talk should be made to patients regularly on the basic hygiene, infection prevention and waste management.

7.4 THEATRE

In the theatre

- Sterilise instruments, towels, drapes and gowns by autoclaving.
- Decontaminate instruments and all materials that are in contact with blood and secretions from the body in 0.5% Chlorine solution or by boiling for 20 minutes where indicated.
- Use protective barriers such as masks, gloves, boots, aprons, eye shield during surgeries and instruments processing.
- Fumigate the theatre when new, before use and every 4-6 months thereafter.

7.5 WASTE DISPOSAL

There is a need to provide adequate waste disposal systems in all health facilities according to global standards. Waste management must start from the point of production with proper segregation, storage, transportation and disposal.

At the point of production, hospital waste should be segregated and deposited into coloured plastic containers depending on the waste management policy. Usually, this should be a minimum of three plastic containers [9]. All personnel, especially the most junior staff handling hospital waste, must be trained on waste management practices. Hospital staff handling, transporting and disposing waste must wear proper protective gear while doing their job. Particularly, they must wear face masks, utility gloves, eye protection and boots.

Chapter 8 DOCUMENTATION

8.1 DATA COLLECTION

Patient records and data are very important for medical audit/research and for facility self-assessment.

8.1.1 Clinical Documentation

Record date and time at every contact with patients. Bio data, refer to the previous chapter and record important details from referral notes and previous medical reports. Pre-operative diagnosis to be clearly stated.

a) Preoperative:

- Record pre-operative preparations that are conducted.
- Vital signs – pulse, BP, respiration, temperature.
- Pre-anaesthetic review – to assess fitness, recorded using the anaesthetic review checklist.
- Obtain written informed consent for surgery.
- Record of pre-operative fluid balance

b) Before a patient is wheeled into the theatre, the anaesthetist and the ward nurse shall review the above records using the standard pre-op checklist.

c) Intra-operative

- Re-identify patient, pre-op diagnosis and type of surgery proposed.
- Record time and type of anaesthesia, anaesthetic complications if any and drugs administered intraoperative.
- Record of the operation reports including the surgical team, intra operative diagnosis, procedures and proper record of complications and surgical management. Duration of surgery, estimation of blood loss, sutures used and intraoperative findings should be documented.
- Documentation in the operation register.

d) Post-operative

- Monitor and record vital signs recovery from anaesthesia.
- Record immediate post op complication and /or request for further management and post-operative reviews.
- Record of postoperative fluid balance initially hourly for 24 hours, then 12 hourly or 24 hourly for 2 weeks.

e) Follow up:

- Is she still leaking urine? If yes, is it while lying or standing at the first follow up visit?
- Check for healing, bladder support and stress incontinence and document all findings.

8.1.2 Social

- Demographic – see previous records
- Psychological support – document support provided and the result following the support.
- Literacy – adult education if not educated started before discharge and after discharge should be documented.
- Social support – who accompanied the patient and the willingness to pay for services.
- Skill acquisition – handwork / crafts – record identified skill patient is interested in.

Chapter 9 TRAINING ISSUES IN FISTULA CARE AND MANAGEMENT

9.1 TRAINEE SELECTION CRITERIA

It is advised that the training team should comprise a doctor, a scrub nurse, ward nurse; and if possible a nurse anaesthetist and a social worker.

The nurse desiring to be trained in fistula care must:

- Show interest in fistula care
- Be willing to practise as a fistula nurse.
- Be willing to train others on the job.
- The trainers should be involved in selection of trainees

Categories of Nurses to be Trained

a. Perioperative nurse
b. Ward nurse
c. Anaesthetist nurse

9.2 DURATION OF TRAINING

This will be staggered in stages:
Standard level training: 4 weeks. Number of patients attended to: perioperative nurse 25; ward nurse 100; and anaesthetist nurse 25.

Advanced level training: 2 weeks. Number of patients attended to: Perioperative nurse 20 comprising 70% of the items listed in table 4 below; ward nurse 50 comprising 70% of the items listed in table 4 below; and anaesthetist nurse 20 cases.

Expert level training: 2 weeks. 20 cases
Training of the Trainer's training: 1 week, for this level of training, the perioperative nurse must have had experience with a minimum of 200 fistula repairs.

9.3. LOG BOOK

Each trainee will carry a log book showing the number of patients managed. It is recommended that follow up of patients (healed or not healed) should be continuous and involve counselling on the need for FP, ANC and subsequent hospital delivery if she becomes pregnant.

9.4 TRAINING CENTRE

For a facility to qualify as a training centre, it must be caring for a minimum of 250 fistula patients per annum. The facility must meet the criteria of a training centre by providing cases with complexity that is appropriate to the level of training required as shown in table 2.

9.5 CONTINUOUS NURSING EDUCATION

This must be encouraged even after the final training in the form of attending conferences and visiting centres with advanced fistula treatment services and training.

9.6 PRACTICUMS / CLINICAL

Trainees should acquaint themselves with exhaustive history taking, examination, and nursing skills outlined in the clinical pathway (appendix 3).

9.7 LEVELS OF TRAINING FOR NURSES IN FISTULA SURGICAL CARE

Table 4 below shows the three different levels of care expected in relationship with the complexity of diagnoses in obstetric and other female genital fistula. There are three different levels of training for nurses which corresponds with the three levels of fistula surgeons training.

Table 4

LEVELS OF TRAINING FOR NURSES AND MIDWIVES IN MANAGEMENT OF FEMALE GENITAL FISTULA		
LEVEL I TRAINING	**LEVEL II TRAINING**	**LEVEL III TRAINING**
General admission	Intermittent catheterization	Care of the patient with the fistula deemed inoperable
Follow up	Bowel preparation	Care of the patient with Urinary Diversion
Discharge	Care of flaps and grafts	Colostomy care
Counselling	Abdominal wound care for patients with abdominal approach	Vaginal Dilatation for patient with Ba-hanya
Infection prevention / Universal precaution	Flushing the bladder Nurses should be able to assist in moderate to complex fistula cases perioperatively. Nurses should be able to manage moderate to complex postoperative fistula cases in the ward. Urethral reconstruction	Care of patient with urostomy Perioperative care of patients with ureteric fistula Post-operative care of patient with ureteric fistula
High level disinfection		Care of patient with neuro-vagina Care of the patient with multiple drainage: Urethral catheter, ureteric catheters, suprapubic catheters, abdominal drains, NG tube
Bladder Irrigation /		Care of the patient with neo urethral reconstruction
Perineal care / Catheter care		Care of Paediatric fistula(congenital fistula)
Biomedical waste disposal. The nurse should be able to assist in simple fistula surgeries. The nurse should be competent to provide basic pre-operative and post-operative care for simple fistula cases.		Care of Geriatric fistula
		Care of the patient with sigmoid neo vagina
		Care of rectal tube

9.8 GENERAL PRINCIPLES OF NURSING CARE FOR PATIENTS WITH GENITAL FISTULA

Nursing care is as critical as the surgical procedure for successful outcomes in managing women and girls with genital fistula. Good communication, compassion and empathy demonstrated with a smile, appropriate touch and listening aid the healing process and could be critical to improved outcomes.

Women and girls with genital fistula are often associated with poverty, illiteracy and harmful cultural practices, and are vulnerable to abuse. Most have been emotionally wounded, stigmatised and their human rights violated. The healthcare workers must show compassion for the patient's vulnerability to win their confidence and ensure that psychological, mental and physical healing takes place.

In order to ensure quality nursing care for women and girls with genital fistula, the General Principles of Nursing Care for Women and Girls with Genital Fistula are very important for all the levels of training starting with level I Nursing Care, Level II Nursing Care, and level III Nursing care.

Furthermore, early ambulation should be encouraged post-surgery to reduce the risk of deep vein thrombosis, pulmonary embolism and others: orthostatic pneumonia and depression.

Vaginal packing materials like simple dry gauze could be used. Oestrogen crème might be considered to improve wound healing.

9.8.1. Clinical Pathways to Quality Nursing Care

There is a shortage of nurses skilled in providing fistula care in Nigeria. This often leads to multi-tasking; frequent rotation to other units of the hospital; and outright loss due to high turnover. These make it difficult to provide regular high quality nursing services due to having a new set of nurses caring for fistula women. One of the ways to overcome this challenge is training and re-training. However, this also has a toll on the trainers who might eventually undergo "training

fatigue". A better way of overcoming this challenge is using checklists and clinical pathways that help maintain quality of care with less need for frequent re-training.

The clinical pathway is a tool that helps map out the critical nursing tasks that need to be done and checked during each shift, each day, before and after surgery. This ensures critical care tasks are not skipped. It also reduces the need for long commentaries by ticking checkboxes leaving more time for the nurse to concentrate on providing the core clinical care required for quality service.

Appendix 3 shows the clinical pathway used at Evangel Vesico Vaginal Fistula Centre Jos. It is a modification of Mercy ships hospital clinical pathway and could be modified to fit into other fistula practices.

Nursing Checklist for Fistula Care

- *Safeguard children and vulnerable adults with genital fistula*
- *Remember the patient's rights to dignity, privacy and agency*
- *Demonstrate good communication, compassion and empathy*
- *Documentation is key, use clinical pathways*
- *Follow good preventive practices*
  - *Hand washing*
  - *Sterile technique*
- *Whenever catheter drainage system is broken, flush bladder with sterile fluid using sterile technique*
- *Early ambulation*
- *Keep urine bags below bladder height*
- *Keep open lines of communication with the operating surgeon*

9.8.2. Level I Nursing Care

These have been discussed in Table 4 above and include basic nursing care with emphasis on the fistula patient and covering the following:

- General admission, group and individual counselling, orientation for the patient, follow up, discharge, infection prevention, universal precaution, high level disinfection, bladder irrigation, perineal care and biomedical waste disposal.

- The perioperative nurse should be able to assist in simple fistula surgeries.

- The ward nurse should be competent to provide basic pre-operative and post-operative care for simple fistula cases.

9.8.3 Level II Nursing Care

These involves the following:

1) Intermittent catheterization
2) Bowel preparation
3) Care of flaps and grafts
4) Abdominal wound care
5) Flushing the bladder

9.8.3.1 Intermittent Catheterization

- All necessary equipment should be provided. These include catheter, water soluble lubricants (e.g., KY Jelly), latex free gloves or surgical gloves, cotton wool and savlon).
- Inform the patient of the procedure.
- Seek consent.
- Provide privacy.
- Ensure the patient is comfortably positioned.
- Wash hands with soap and water and dry.
- Ensure aseptic technique.
- Open the catheter package halfway, being careful not to touch its tip.
- Place lubricant gel on the catheter tip.
- Gently separate the labia with one hand and wash from top to bottom using cotton wool and savlon. Repeat with a clean wipe.
- Lubricate tip of the catheter with water soluble gel and gently slide into the urethra. If resistance is felt, gently rotate the catheter a little. Once urine is flowing, push the catheter a few more centimetres to ensure that it is in the bladder.
- When urine flow stops, withdraw the catheter slowly. It may start to drain again. Wait until this ceases, then remove the catheter. This ensures complete emptying.
- The catheter should be discarded and hands washed with soap and water.
- Use the appropriate size catheter.
- The indwelling catheter should be secured to the thigh or abdomen after insertion to prevent movement and the exertion of excessive force on the bladder neck or urethra.
- Patients practising intermittent catheterization should pay close attention to the catheterization schedule and avoid bladder over distension and unnecessary catheterizations.
- Intermittent catheterization should be performed as indicated in the post-operative management.

9.8.3.2 Bowel preparation

- Explain procedure to patient
- Seek consent
- Advise patient to modify diet
- Advise patient to increase fluid intake
- Assemble sterilised instruments
- Give fleet enema where indicated
- Administer prescribed antibiotics
- Monitor diet accordingly
- Nothing to eat or drink after midnight

9.8.3.3 Care of Flaps and Grafts

Postoperative Nursing Intervention

- Check vital signs after surgery and monitor closely.
- Place the patient in a comfortable position, avoid contact with the flap and graft.
- Check for proper blood circulation of the flap by assessing for colour.
- Assess flaps regularly for changes in size and swelling.
- Encourage patient to rest maximally and avoid strenuous activities for days; this will help in wound healing.
- Keep the dressing and area around it clean and free from dirt or sweat.
- Do not let the dressing get wet.
- Avoid contact with the dressing, leave in place for as long as recommended.
- Administer prescribed medication accordingly.
- Avoid any movement that might stretch or injure the flap or graft. Avoid hitting or bumping the area.
- Change dressing as prescribed or recommended using aseptic technique.
- Advise patient not to scratch the wound or pick it even if it becomes itchy.
- Monitor for key indicators of haematoma or other complications like palpable crepitus beneath the skin.
- Donor site dressing should be kept clean and dry. It should only be removed when recommended and left uncovered. However, if it is an area covered by clothing, keep it loosely covered to protect the site.
- Advice patients not to apply lotions or creams to the wound unless prescribed.
- On discharge, patient may be taught on how to properly care for the operation site.

9.8.3.4 Abdominal Wound Care

- Place patient in a comfortable position
- Assess wound for pus or abnormal drainage
- Monitor vital signs to check for fever
- Palpate abdomen for tenderness or distension
- Observe for bowel movement.

Changing a dressing

- Inform the patient of the procedure and seek consent.
- Assemble instruments and requirements for dressing
- Wash hands thoroughly and dry.
- Put on surgical gloves
- Loosen the plaster or tape around old dressing
- Remove old dressing.
- Inspect incision for signs of infection
- Clean the wound
- Replace dressing
- Discard dressing accordingly
- Wash hands and make patient comfortable
- Document procedure.

9.8.3.5 Flushing the Urethral Catheter

- Catheter might be blocked by blood clots, small particles of bladder stones, bladder tissue, or debris from poor hydration. In this case the bladder could be flushed using a bladder syringe and plunger.
- It is always wise to ensure that the bladder capacity is noted from the surgeon's operation notes.
- The bladder should not be flushed with volume exceeding the bladder capacity, otherwise, the repair could be compromised.

9.8.4 Level III Nursing Care

These include providing nursing care to patients with the following:

1) Fistula Deemed Inoperable
2) Urinary Diversion
3) Colostomy
4) Gynaetresia
5) Urostomy
6) Multiple Drainage
7) Neo-Urethral reconstruction
8) Paediatric patient
9) Geriatric patient
10) Sigmoid-neovagina
11) Rectal Tube

9.8.4.1 Care of the Patient with Fistula Deemed Inoperable

- Provide Psychological care; reassure patient and caregivers
- Encourage patients to maintain proper hygiene to minimise infection
- Assess for competence of urinary diversion
- Counsel patient on urinary diversion

9.8.4.2 Care of the Patient with Urinary Diversion

Preoperative Nursing Care

- Nurse should make sure patient understand the procedure and its outcome
- Assess nutritional status
- Relieve anxiety, increase knowledge about the surgical procedure and expected outcome.
- Ensure that patient has no RVF or perineal deficiency
- Obtain informed consent from patient
- Assess anal competence by enema to empty the rectum one week before procedure.
- Explain properly to the patient what to expect during the enema.
- Document all findings during and after enema.
- Patient's nutrition should be closely monitored
- Patient should be on full liquid for three days to procedure.
- Patient should be placed on clear liquid a day to the procedure
- Provide intravenous fluid a day to the procedure
- Nil per os from midnight before procedure.
- Monitor electrolyte imbalance.
- Administer PO Dulcolax and PO Neomycin as prescribed by Doctor
- Tap water enema to clear, a day to the surgery and morning of the surgery

Post-Operative Nursing Care

- Immediately after surgery, place patient in a supine position and make comfortable
- Monitor catheter and drainage systems closely
- Maintain input and output chart
- Monitor vital signs
- Monitor electrolyte balance
- Observe for haemorrhage
- Administer medications and IV fluids accordingly.
- Maintain skin integrity
- Relieve pain
- Increase self esteem
- Develop appropriate coping mechanisms to accept and deal with altered urinary function.
- Assist patient to ambulate as soon as possible to prevent complications of immobility.
- Encourage patient on deep breathing exercise to minimise postoperative respiratory complications.
- Catheters and stents should be stabilised to prevent artificial dislodgement.
- Enable patent catheter and urine flow.

9.8.4.3 Colostomy Care

Pre-Operative Nursing Care

- Provide psychological care: patients need to be assured that colostomy can be cared for without interfering with everyday life.
- Obtain informed consent
- A low fibre diet is given two days before the surgery
- Enema to clear can be done prior to surgery
- Laxatives can be administered to clear the bowel prior to surgery day
- Monitor vital signs and document accordingly
- The Doctor or Nurse anaesthetist should be informed for proper review

Post-Operative Nursing Care

- Protect the skin around the stoma.
- Use the right skin barrier opening
- Apply skin barrier paste
- Proper care should be applied in removing the pouching system,
- Before replacing the pouch, the skin around the stoma should be properly cleaned.
- Observe for hypersensitivity reactions to plaster, tapes or pouch materials and treat accordingly
- Provide psychological care to patients, help patient to adapt to their new way of life.
- The Nurse should empty the pouch system regularly and teach the patients and caregivers on proper care.
- The pouch should be firmly positioned
- Patients should be encouraged to eat small meals at regular intervals to avoid gas
- Proper care should be given to skin to avoid irritations, if any is noticed, treat immediately
- Patients diet should be modified especially food high in fibre to prevent obstruction
- Observe patient closely for obstruction.
- Patients should be advised on intake of unprescribed drugs, laxatives should be avoided totally.
- Proper rehydration should be encouraged to prevent electrolyte imbalance.

- Report any abnormal swelling, bleeding or irritation.

9.8.4.4 Vaginal Dilatation for Patients with Gynaetresia

- Introduce yourself to the patient.
- Explain the procedure to the patient.
- Reassure the patient you will stop if it becomes too painful at any point.
- Ensure consent is adequately obtained and documented.
- Request a chaperone.

Preparation

- Assemble all necessary requirements for procedure (e.g. Galli pots, swab, savlon, Lubricant, condom, different sizes of dilators)
- Put on apron
- Make sure dilators are high level disinfected
- Wash hands thoroughly and wear gloves
- Place the patient in a lithotomy position and make it comfortable.
- Cover the patient with linen to maintain dignity
- Ensure there is adequate lighting available for good visibility during procedure
- Ask your chaperone to be on the other side of the couch to support the patient

Inspection

- Gently part the labia and examine for warts.
- Inspect the peri-anal area for skin disease to avoid irritation

Procedure

- The vulva should be properly cleaned using aseptic technique to avoid infection
- Use the smallest size of dilator and change accordingly
- Condom is attached to the dilator to provide a barrier and easy penetration.
- Lubricate generously.
- Part the labia and gently insert dilator into the vagina under the pubic bone and continue inserting straight inward while looking at the face of the patient for signs of tenderness.
- Expect to feel some form of resistance.
- Insert dilator into the entire depth of vagina.
- Dilate gently putting into consideration the width and depth of the Vagina
- Observe the patient for bleeding.
- If any form of discomfort is noticed, stop immediately and begin again more gently.
- Maintain effective communication with patient during the procedure.
- After the procedure, clean and make patient comfortable
- Ask the patient to re-dress
- Wash hands
- High-level disinfect the equipment.

9.8.4.5 Care of the Patient with Urostomy

Pre-Operative Nursing Care

- Proper history should be taken from patient
- Obtain informed consent
- The patient should receive instructions on “no food intake 8 hrs before surgery and no fluid intake two hours before surgery”
- Fluid balance of the patient should be assessed. If there is any form of dehydration, fluid therapy should be commenced before the surgery.
- The correct size of urostomy bag should be used

Post-Operative Nursing Care

- The nurse should assess stent function; the stent should drain urine without any form of obstruction.
- Observe for decreased urine output, it could be due to dehydration or obstruction.
- If stents are not producing urine, they can be gently flushed using sterile water or sodium chloride.
- Protect the incision with a sterile dressing
- Proper hand washing should be maintained before and after contact with the operation site
- Aseptic technique should be maintained when changing incision dressing
- Proper care should be given to the skin to avoid irritation
- Patients should be advised on skin products to apply in order to prevent the skin from being too dry or too oil
- The Doctor should be informed immediately if there is any redness or bleeding around the stoma.
- Monitor fluid and urine output using input and output charts.
- Observe patient closely for fluid overload or dehydration.
- Bowel function should be observed daily
- Patients and caregivers should be educated on proper care of incision sites and danger signs to look out for.
- Monitor vital signs closely, fever should be reported and treated accordingly
- Encourage patients to ambulate.

9.8.4.6 Care of the Patient with Multiple Drainage (Urethral Catheter, Ureteric Catheter, Suprapubic Catheter, Abdominal Drains, Nasogastric Tube)

- Provide psychological care by reassuring the patient
- Always maintain a comfortable position
- All drainage tubes should be properly strapped to avoid dislodgement
- Make sure that urine is flowing out of the catheter into the urine collection bag.
- Make sure that the catheter tubing does not get twisted or kinked.
- Ensure that all tubes are draining
- Keep the urine collection bag below the level of the bladder.
- Make sure the urine collection bag does not drag and pull on the catheter.
- As much as possible provide physical care for the patient
- Check for inflammation or signs of infection in the area of insertion. Signs of infection include pus or irritated, swollen, red, or tender skin.
- Do not apply powder or lotion to the skin around tubes
- Do not pull the catheter.
- Supra pubic catheter should be kept firmly at the lower abdomen
- Drainage bags should be empty regularly when it's half full or at bed time
- Wash hands with soap and water before and after emptying the urine bag.
- Maintain the function of the NG Tube
- Assess and measure Naso-gastro content.
- Provide care during NG Tube insertion to avoid discomfort
- Assess for fluid and electrolyte imbalance

9.8.4.7 Care of the Patient with Neo-urethral reconstruction

- Reassure patient
- Monitor vital signs and chart accordingly
- Encourage patient to ambulate
- Provide physical care like bed bath when necessary
- Assist patient in changing positions
- Monitor operation closely to prevent breakdown
- Always observe aseptic technique when handling patient
- Reduce pressure as much as possible on operation site
- Ensure adequate rehydration to reduce discomfort when voiding.
- Monitor urine input and output.
- Administer mild analgesics if necessary
- Prevent tension on the catheter
- Ensure that catheter has been secured with sutures unto the mons pubis or labia to avoid undue weight on the repair site which might lead to a wound breakdown
- Teach patient on how to properly care for themselves.

9.8.4.8 Care of the Paediatric Patient with Fistula

Pre-Operative Nursing Care

- Safeguarding issues (Protection against Sexual Exploitation and Abuse (PSEA))
- Reassure and be gentle with the patient
- Obtain proper history and consent from parents/ guardian/care-giver
- Carry out physical examination and document
- Perform necessary lab examination
- Prepare patient to be examined under anaesthesia if needed
- Inform caregivers of diagnosis
- Explain procedure
- Schedule for surgery where applicable
- In some cases, IVU may be recommended, prepare patient accordingly
- Obtain informed consent
- Check vital signs

Post-Operative Nursing Care

- Reassure caregivers and patients
- Sooth patient to provide comfort
- Place patient in a comfortable position
- Monitor vital signs closely
- Monitor patient input and output
- Ensure patient is comfortable as much as possible
- The caregivers must ensure that the patient at all times is drinking, draining and dry. If the patient is wet after surgery, inform the surgeon.
- Foley catheter must be in situ,
- Gently handle vaginal pack when placed
- Discontinue vaginal pack when due
- Provide physical care as much as possible
- Monitor for haemorrhage.
- Nothing must pull on the catheter
- Catheter must not be blocked

9.8.4.9 Care of Geriatric Patient with Fistula

Pre-Operative Nursing Care

- Safeguarding issues (Protection against Sexual Exploitation and Abuse (PSEA))
- Reassure and be gentle with the patient
- Obtain proper history and consent from parents/ guardian/care-giver
- Carry out physical examination and document
- Perform necessary investigation
- Prepare patient to be examined under anaesthesia if needed
- Inform caregivers of diagnosis
- Explain procedure
- Schedule for surgery where applicable
- Obtain informed consent
- Check vital signs

Post-operative Nursing Care

- Administer prescribed medication
- Ensure urethral catheter, rectal tube and suprapubic/abdominal drainage is / are insitu and draining well.
- Encourage patient to take adequate fluids
- Patients diet should be closely monitored
- Observe patient's vital signs as recommended
- Monitor input and output using the input and output chart
- Monitor electrolytes and correct accordingly
- Perineal toileting; vulva toileting should be done twice daily after surgery.
- Vaginal packing should be removed one or two days after surgery
- Patient should be encouraged to ambulate.
- Remove catheter as recommended

Advice on Discharge

- Abstinence from sexual relationships
- Follow up consultations as recommended
- Encourage on personal hygiene
- Patient should void when necessary
- Avoid strenuous activities (especially activities that could increase intra-abdominal pressure) within the first two months

9.8.4.10 Care of the Patient with Sigmoid Neo-vaginal

- Monitor nutritional status
- Assess improvement e.g. return of bowel sound
- Subjective improvement in abdominal pain and tenderness
- Monitor vital signs closely and document
- Maintain input and output chart
- Avoid strenuous activities
- Observe clean abdominal incision site
- Reassure patient that labia swelling is normal and will gradually reduce
- Personal hygiene should be encouraged to prevent infection
- Wash hands thoroughly before and after perineal care
- Irrigate the neo vagina with saline every 48 hours to remove mucus
- Observe vaginal discharge. Abnormal vaginal discharge should be reported and treated immediately
- Inspect for bleeding
- Patients are advised to commence diet gradually beginning with liquid diet before advancing.
- Vaginal dilation enhances recovery; it should be done as recommended. Dilators may be provided to patients with instructions regarding dilation.
- Administer prescribed medication.

9.8.4.11 Care of the Patient with Rectal Tube

- Provide psychological support
- Monitor patient closely
- Maintain output chart
- Ensure tube is draining adequately
- Avoid kinking of tube
- Fluids and electrolytes should be maintained through intravenous infusions.
- Insertion site should be kept clean
- Assist patient to carry out physical activity
- Administer prescribed antibiotics
- Advice patient on low residue diet
- Patient should be assisted in ambulation.
- If following urinary diversion, monitor urine output from ureteric stents on both sides

Nurses are the first and last to interact with women with fistula in a clinical setting. Nurses also have the rare privilege of being with the patients all through their stay on the ward, before and after surgery. They are, therefore, best placed to identify problems or complications early, provide immediate treatment needed, and alert the surgeon early enough for further care. Their contribution to the care of women and girls with genital fistula is therefore critical to the management of the disorder.

Three main areas need to be checked very closely: bleeding, urine output and sepsis.

Chapter 10 REHABILITATION AND REINTEGRATION

10.1 DEFINITIONS

Rehabilitation: “Rehabilitation in OF refers to any experience that strives to improve the quality of life of women before or after corrective surgery”.[10]

Reintegration: “Reintegration on the other hand, is the re-acceptance of the obstetric fistula patients back into their social environment following harrowing experiences of either faecal or urinary incontinence and in some instances, both of which have been associated with loss of self-esteem and dignity. It includes programmes aimed to improve overall status of women through empowerment and enhancement of their socio-economic status”.[10]

10.2 REHABILITATION AND REINTEGRATION LANDSCAPE

Obstetric fistula presents enormous psychological, social and economic challenges. While the situation appears to be changing, many patients still face stigma, discrimination, abandonment and neglect. However, anecdotal reports tend to suggest that increasingly, some of the women with OF are still supported by their husbands. There is therefore the need to develop client-centred, needs-based rehabilitation and reintegration strategies that meet the needs of individual clients.

Beyond the medical and surgical treatment for obstetric fistula, a holistic approach that addresses the psychosocial and socioeconomic needs of survivors is required to ensure full recovery and healing from fistula. Follow-up of fistula patients is a major gap in the continuum of care. Tragically, only a fraction of needy fistula patients are offered reintegration services. All countries affected by fistula should track this indicator to ensure access to reintegration services. According to data collected by UNFPA in 2017, at least 27 countries have set up mechanisms to track survivors after treatment, a critical aspect of healing and successful reintegration. Intensive social reintegration of women and girls whose cases are deemed to be inoperable or incurable also remain a major gap; as these women endure significant social challenges, an individualised approach, tailored to their specific needs, is required to facilitate their reintegration.

Reintegration and rehabilitation services must be holistic, comprehensive, continuous and available while they are needed. They should include counselling and follow-up throughout all phases of treatment and recovery, from the first point of contact to after the patient’s discharge from the hospital, including health education, family planning services, psychosocial services and income -generating activities, which provide livelihood, renewed social connections and a sense of purpose, combined with community sensitization to reduce stigma and discrimination. Psychological support is necessary for all fistula patients, especially those who have not been fully healed.

Obstetric fistula programmes should take careful consideration of women needing rehabilitation and ensure that services are either provided by the programme or there is adequate linkage to institutions that provide such services to ensure that the recovery is not only surgical but holistic.

10.3 COMPONENTS OF REHABILITATION

Rehabilitation of OF include; Health Promotion, physiotherapy, economic empowerment and social support. Details of this can be obtained in National Protocol for Rehabilitation & Social Reintegration Of Women Pre & Post Obstetric Fistula Repairs, 2021.

APPENDICES

APPENDIX 1: MINIMUM EQUIPMENT

- Hydraulic Operating Table
- Anaesthetic Machine
- Operating Lamp
- Autoclave Machine (electrical and manual)
- Suction Machine
- Diathermy Machine
- Trolleys
- Surgical Instruments
- Auvard Vaginal Speculum
- Cervical Dilators (set)
- Small Artery Forceps
- Big Artery Forceps
- Bard Parker Handle
- Thorex Scissors
- Curved Assistance Scissors
- Stitch Scissors (straight)
- Dissecting Forceps
- Aneurysm Needle
- Needle Holder

APPENDIX 2: CONSUMABLES

- Gauze
- Sutures (absorbable and non-absorbable)
- Catheter (size 16, 18, 20)
- Surgical Gloves/Examination Gloves
- Cotton Wool
- Antiseptics
- Spiral Needles
- Spirit
- Syringes and Needles (5cc, 10cc, 20cc, 50cc)

APPENDIX 3: CLINICAL PATHWAYS

1) FEMALE GENITAL FISTULA, PRE – OP CLINICAL PATHWAY

Surgery: ☐ VVF ☐ RVF ☐ Others

Date: _____ Day-month-year	Pre-op: Admission Nurse: _____	Pre-Op: Day of Surgery Night Shift Nurse: _____ Day Shift Nurse: _____ _____ Day-month-year	Post-Op: Day of Surgery Day Shift Nurse: _____ _____ Time back from OR Evening Shift Nurse: _____
Patient and Family Teaching	☐ Explain surgery ☐ Pre-op investigations ☐ Pre-op round - Type of Anesthesia (if spinal, they will be awake) ☐ How to use bathroom ☐ Catheter care ☐ Chance surgery won't be successful	☐ Explain surgical procedure and what to expect post-op (monitoring, IV, bed rest, catheter care, vaginal pack, etc.)	☐ Encourage patient to report pain or nausea after surgery ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor, but below the bladder when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Avoid straining while having a bowel movement ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ Bowel movement post-suppository ☐ No bowel movement – Enema done before 10:00 pm _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	☐ Document pre-op vital signs at **6:00 am** ☐ Pre-op- nursing assessment	**Post – Op Monitoring Protocol:** ☐ Vital Signs (VS) /Observation (OBS) **upon arrival,** then as per doctor's prescription otherwise consider every 30 minutes x4, every 60min x4, every 6 hr x 48 hr. ☐ Use pulse oximeter for SaO2 upon arrival until stable ☐ Temp on arrival then if unstable, every 2 hour until stable ☐ Assess for pain and nausea ☐ Post-op nursing assessment upon arrival then every shift ☐ Spinal Anaesthetist Record with VS/OBS ☐ N/A ☐ Strict fluid intake / output every hour for the first 6 hours ☐ assess from patient to catheter bag to ensure catheter secured well, draining well, not kinked, no visible clots present and bed dry. ☐ **Dry** ☐ **Intermittently wet** ☐ **Constantly wet** **Notify in-charge nurse of newly wet / leaking patient ** ☐ Ureteral Stents ☐ R ☐ L ☐ Bilateral ☐ Urine color at **10:00 pm** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present Others _____
Nursing Care	☐ Shower ☐ Nothing per oral after 12:00 am ☐ Complete pre-op checklist _____ _____ _____ _____	☐ Complete Pre-op Checklist on Operating Room Record ☐ Standard soap shower in morning before surgery	☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post – op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ stent not draining, flushed per post – op prescription ☐ Vaginal packing until Post-Operative Day ____ ☐ Vaginal bleeding, ☐ notify in-Charge Nurse Others: _____
IV & Medication	☐ Glycerin suppository before 6:00pm ☐ Fleet enema if no BM by 10:00 pm ☐ RVF: per Doctor's prescription	☐ Enema pre-op medications transcribed onto PRN Medication Sheet As per prescription (1st to OR or on call) ☐ Give pre-med ☐ N/A ☐ Flush IV cannula ☐ Give 500 ml RL or NS bolus, once bolus complete continue fluids to keep line open (TKO)	☐ Give scheduled pain relief ☐ Vitamin C as scheduled Intravenous ☐ Visual Infusion Phlebitis Score ---------- (score>2, remove & restart IV) ☐ IV fluids: _____@ _____ drops/minute ☐ IV fluids D/C'd @_____: Flush IV with 5 mls NS at the end of the shift
Activity and Safety			☐ Bedrest ☐ Bathroom Privileges ☐ Assist with turning. Be careful to keep catheter &/or stents from pulling
Nutrition and Fluid Balance	☐ Encourage fluid intake ☐ RVF: per Doctor's prescription ☐ Give 1.5L water bottle	☐ Check NPO/Fasting prescription from Anaesthesia Fast from solids at _____ Fast from liquids at _____ ☐ Patient / caregiver aware of fasting prescription ☐ Have patient drink 500mls of water immediately before NPO	☐ Clear Liquids ☐ Full Liquids ☐ Regular ☐ Advance diet as tolerated ☐ **8:00 pm** Fill water bottle to 500 ml, may fill to 1000 ml if urine bloody or clots present ☐ **8:00 pm** Total intake and output
Nursing Notes	_____ _____ _____	_____ _____ _____	_____ _____ _____

2) FEMALE GENITAL FISTULA, POST – OP CLINICAL PATHWAY

Post op diagnosis: _____

Date: _____ Day-month-year	POD# 1 Morning Shift Nurse _____	POD # 1 Afternoon Shift Nurse _____	POD # 1 Night Shift Nurse _____
Patient and Family Teaching		☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots	☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ **Drinking,** ☐ **Draining,** ☐ **Dry** ☐ **Intermittent wet,** ☐ **Constant wet** ☐ Vital signs per routine post-op ☐ Physical Assessment ☐ Hourly urine output if necessary, Urine color _____ ☐ Vaginal Bleeding or discharge	☐ **Drinking** ☐ **Draining** ☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **Q 8 hours** ☐ Physical Assessment Q shift ☐ Strict fluid intake / output as indicated or Q shift ☐ Assess patient catheter / urine bag to ensure catheter draining well, not kinked, not visible clots present and bed dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 pm** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if patient wet _____ _____ _____	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **Q 4 hours** ☐ Physical Assessment Q shift ☐ Spinal anaesthetic record with vital sign (VS)/ observation (OBS) ☐ N/A ☐ Strict fluid intake / output every 2 hours x 48 hrs ☐ Assess from patient to catheter bag to ensure catheter draining well, not kinked, not visible clots present and pad dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **8:00 pm** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if saturating > 2 pads in 4 hours _____ _____ _____
Nursing Care	☐ Catheter secure ☐ Catheter patent ☐ Clots present ☐ Irrigated catheter per post-op order x _____ ☐ Urine pots changed ☐ Vaginal packing: ☐ In place ☐ Remove at **6:00am**, if indicated _____ _____	☐ Pericare BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op orders ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ **Vaginal packing:** ☐ In place ☐ Out ☐ Removed Intact _____ _____ _____	☐ Pericare BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ **Vaginal packing:** ☐ In place ☐ Out ☐ Removed Intact
Wound Care	☐ N/A ☐ Dressing intact ☐ Dressing changed _____ _____ _____	☐ N/A ☐ Abdominal repair: leave dressing intact x 48hrs., Then remove and leave open to air (OTA); if prescribed by doctor ☐ Dressing clean, dry, & intact ☐ Dressing changed ☐ OTA Orders _____ _____	☐ N/A ☐ Abdominal repair: leave dressing intact x 48., Then remove and leave open to air (OTA) ☐ Dressing clean, dry, & intact ☐ Dressing changed ☐ OTA Prescriptions _____
IV & Medication	☐ VIP Score_____ (score>2, remove and restart IV) ☐ IV Fluids _____@_____ ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____drops/min ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per doctor's prescription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per prescription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum
Activity and Safety	☐ Bed rest ☐ Off bed rest	☐ Bed rest ☐ Walking ☐ Assist to the bathroom for the first time ____ _____	☐ Bed rest Encourage ambulation ☐ Other _____
Nutrition and Fluid Balance	☐ **6:00 am** water bottle filled to 1500 ml ☐ **6:00 am** Total Input & Output ☐ & 24 hr Total	☐ Regular ☐ Other _____ ☐ **12:00** noon Water bottle filled to 1000 ml ☐ **12:00** noon Total intake and output	☐ Regular ☐ Other _____ ☐ **8:00** pm Water bottle filled to 500 ml ☐ **8:00** pmTotal intake and output
Nursing Notes	_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____

DAY 2:

Surgery: ☐ VVF ☐ UVF ☐ RVF

Date: _____ Day-month-year	POD# 2 Night Shift Nurse _____	POD # 2 Day Shift Nurse _____	POD # 2 Eve Shift Nurse _____
Patient and Family Teaching		☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots	☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ **Dry** ☐ **Intermittent Wet** ☐ **Constant Wet** ☐ Vital signs every **6 hours if stable** ☐ Input and Output (I&O) every **4 hours** ☐ Physical Assessment ☐ Urine color _____ ☐ Vaginal Bleeding or discharge	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every 6 hours** ☐ Physical Assessment every shift ☐ Strict fluid intake / output **every 4 hours** ☐ Assess from patient to catheter bag to ensure catheter draining well, not kinked, not visible clots present and pad dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if saturating > 2 pads in 4 hours _____ _____ _____	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every 6 hours** ☐ Physical Assessment every shift ☐ Strict fluid intake / output every 4 hours ☐ Assess from patient to catheter bag to ensure catheter draining well, not kinked, not visible clots present and pad dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **8:00 pm** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if more than two pads soaked in 4 hours _____ _____ _____
Nursing Care	☐ Catheter secure ☐ Catheter patent ☐ Clots present ☐ Irrigated catheter per post-op prescription _____ ☐ Urine pots changed ☐ Vaginal packing: ☐ In place ☐ Remove at **6:00 am,** intact _____ _____ _____ _____	☐ Pericare BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ **Vaginal packing:** ☐ In place ☐ Out ☐ Removed Intact _____ _____ _____ _____	☐ Pericare BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ **Vaginal packing:** ☐ In place ☐ Out ☐ Removed Intact _____ _____ _____ _____
Wound Care	☐ N/A ☐ Dressing intact ☐ Dressing changed _____ _____ _____	☐ N/A ☐ Abdominal repair: leave dressing intact x 48., Then remove and leave open to air (OTA) ☐ Dressing clean, dry, & intact ☐ Dressing changed ☐ OTA Prescriptions _____ _____ _____	☐ N/A ☐ Abdominal repair: leave dressing intact x 48., Then remove and leave open to air (OTA) ☐ Dressing clean, dry, & intact ☐ Dressing changed ☐ OTA Prescriptions _____ _____
IV & Medication	☐ VIP Score_____ (score>2, remove and restart IV) ☐ IV Fluids _____@_____ ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per prescription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per prescription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum
Activity and Safety	☐ Bed rest ☐ Off bed rest	☐ Bed rest ☐ Walking ☐ Assist to the bathroom for the first time _____	☐ Bedrest Encourage ambulation ☐ Other _____
Nutrition and Fluid Balance	☐ 6:00 am water bottle filled to 1500 ml ☐ 6:00 am Total I&O ☐ & 24 hr Total	☐ Regular ☐ Other _____ ☐ **12:00 noon** Water bottle filled to 1000 ml ☐ **12:00 noon** Total intake and output	☐ Regular ☐ Other _____ ☐ **8:00** pm Water bottle filled to 500 ml ☐ **8:00** pm Total intake and output
Nursing Notes	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____

DAY 3:
Surgery: ☐ VVF ☐ RVF ☐ OTHERS

Date: _____ Day-month-year	POD# 3 Night Shift Nurse _____	POD # 3 Day Shift Nurse _____	POD # 3 Eve Shift Nurse _____
Patient and Family Teaching		☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots	☐ Encourage patient to report pain or nausea post-op ☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ **Dry** ☐ **Intermittent Wet** ☐ **Constant Wet** ☐ Vital signs every **6 hours** ☐ Physical Assessment ☐ I/O **every 4 hours** ☐ Urine color _____ ☐ Vaginal Bleeding or discharge	☐ **Dry** ☐ **Intermittently Wet** ☐ **Constantly Wet** ☐ Vital signs **every Shift** ☐ Physical Assessment every shift ☐ Strict fluid intake / output **every 4 hours** ☐ Assess from patient to catheter bag to ensure catheter draining well, not kinked, not visible clots present and pad dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if more than two pads are soaked in 4 hours _____ _____ _____	☐ **Dry** ☐ **Intermittently Wet** ☐ **Constantly Wet** ☐ Vital signs **every shift** ☐ Physical Assessment every shift ☐ Strict fluid intake / output every 8 hours ☐ Assess from patient to catheter bag to ensure catheter draining well, not kinked, not visible clots present and pad dry Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **8:00 pm** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if more than two pads are soaked in 4 hours _____ _____ _____
Nursing Care	☐ Catheter secure ☐ Catheter patent ☐ Clots present ☐ Irrigated catheter per post-op order _____ ☐ Urine pots changed	☐ Pericare BID ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon	☐ Pericare BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present ☐ Catheter secure ☐ Catheter Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon
Wound Care	☐ N/A ☐ Dressing intact ☐ Dressing changed _____ _____ _____	☐ N/A ☐ Abdominal repair: ☐ Open to air (OTA) ☐ Dressing clean, dry, & intact ☐ Dressing changed Prescriptions _____ _____ _____	☐ N/A ☐ Abdominal repair: ☐ Open to air (OTA) ☐ Dressing clean, dry, & intact ☐ Dressing changed Prescriptions _____ _____ _____
IV & Medication	☐ VIP Score_____ (score>2, remove and restart IV) ☐ IV Fluids _____@_____ ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____ml/hour ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per prescription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum	☐ VIP Score_____(score>2, remove and restart IV) ☐ IV Fluids _____@_____ml/hr ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per order for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum
Activity and Safety		☐ Encourage ambulation ☐ Other _____ _____	☐ Encourage ambulation ☐ Other _____ _____
Nutrition and Fluid Balance	☐ **6:00 am** water bottle filled to 1500 ml ☐ **6:00 am** Total I/O ☐ & 24 hour Total	☐ Regular ☐ Other _____ _____ ☐ **12:00 noon** Water bottle filled to 1000 ml ☐ **12:00 noon** Total intake and output	☐ Regular ☐ Other _____ _____ ☐ **8:00 pm** Water bottle filled to 500 ml ☐ **8:00 pm** Total intake and output
Nursing Notes	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____

3) FEMALE GENITAL FISTULA POST – OP CONTINUATION PATHWAY

Surgery: ☐ VVF ☐ RVF ☐ OTHERS

Date: _____ Day-month-year	POD#_____Night Shift Nurse _____	POD #_____ Day Shift Nurse _____	POD #_____ Eve Shift Nurse _____
Patient and Family Teaching		☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots	☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every shift** ☐ Physical Assessment ☐ Urine color _____ ☐ Vaginal Bleeding or discharge	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every shift** ☐ Physical Assessment every shift Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if more than two pads are soaked > 2 pads in 4 hours _____ _____ _____	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **Q shift** ☐ Physical Assessment Q shift Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if saturating > 2 pads in 4 hours _____ _____ _____
Nursing Care	☐ Catheter secure ☐ Catheter patent ☐ Clots present ☐ Irrigated catheter per post-op order _____ ☐ Urine pots changed ☐ Catheter Removed, On voiding Protocol (see voiding record) (& Voiding Protocol from Day & Eve shifts)	☐ **Pericare** BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present Catheter N/A Secure and Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op orders ☐ If urine output is <30 ml in one hour, flush as above and notify Charge Nurse who will contact on-call fistula surgeon ☐ Voiding Protocol N/A ☐ <4 hrs after catheter removed: bladder scan within 10 mins of void to determine post –void residual (PVR) ☐ Notify Charge Nurse if PVR>150mls or s/s of retention: decreasing amount of voids, dribbling urine, suprapubic pain ☐ Ensure Oxybutynin discontinued	☐ **Pericare** BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present Catheter N/A Secure and Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op orders ☐ If urine output is <30 ml in one hour, flush as above and notify Charge Nurse who will contact on-call fistula surgeon ☐ Voiding Protocol N/A ☐ <4 hrs after catheter removed: bladder scan within 10 mins of void to determine post –void residual (PVR) ☐ Notify Charge Nurse if PVR>150mls or s/s of retention: decreasing amount of voids, dribbling urine, suprapubic pain ☐ Ensure Oxybutynin discontinued
Wound Care	☐ N/A ☐ Dressing intact ☐ Dressing changed _____ _____ _____	☐ N/A ☐ Abdominal repair: ☐ OTA ☐ Dressing clean, dry, & intact ☐ Dressing changed Orders _____	☐ N/A ☐ Abdominal repair: ☐ OTA ☐ Dressing clean, dry, & intact ☐ Dressing changed Orders _____
IV & Medication	☐ VIP Score_____ (score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula	☐ VIP Score_____(score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per order for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum	☐ VIP Score_____(score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per order for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum
Activity and Safety		☐ Encourage ambulation ☐ Other _____	☐ Encourage ambulation ☐ Other _____
Nutrition and Fluid Balance	☐ 6:00 am water bottle filled to: _____ ☐ Catheter: 1500 ml ☐ Voiding: 750 ml ☐ **6:00 am** Total Input & Output ☐ & 24 hr Total	☐ Regular ☐ Other _____ _____ ☐ **12:00 noon** Water bottle filled to 1000 ml ☐ Catheter: 1000 mls ☐ Voiding: 750 ml ☐ **12:00 noon** Total intake and output	☐ Regular ☐ Other _____ ☐ **12:00 noon** Water bottle filled to 1000 ml ☐ Catheter: 1000 mls ☐ Voiding: 750 ml ☐ **12:00 noon** Total intake and output
Nursing Notes	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____

Surgery: ☐ VVF ☐ RVF ☐ OTHERS

Date: _____ Day-month-year	POD#_____Night Shift Nurse _____	POD #_____ Day Shift Nurse _____	POD #_____ Eve Shift Nurse _____
Patient and Family Teaching		☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots	☐ Teach Catheter care: not to pull, kink or twist; keep bag off floor when out of bed ☐ Report bladder fullness, pain, or spasm; or newly wet ☐ Maintain adequate fluid intake to ensure urine clear and without clots
Nursing Assessment	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every shift** ☐ Physical Assessment ☐ Urine color _____ ☐ Vaginal Bleeding or discharge	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every shift** ☐ Physical Assessment every shift Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if more than 2 pads are soaked in 4 hours _____ _____ _____	☐ **Dry** ☐ **Intermittent wet** ☐ **Constant wet** ☐ Vital signs **every shift** ☐ Physical Assessment Q shift Ureteral Stents secure ☐ R ☐ L ☐ Bilateral ☐ N/A ☐ Urine color at **12:00 noon** ☐ Yellow ☐ Pink / blood tinged ☐ Tea colored ☐ Bloody ☐ Clots present ☐ Vaginal Bleeding or discharge ☐ Notify surgeon if saturating > 2 pads in 4 hours _____ _____ _____
Nursing Care	☐ Catheter secure ☐ Catheter patent ☐ Clots present ☐ Irrigated catheter per post-op prescription _____ ☐ Urine pots changed ☐ Catheter Removed, On voiding Protocol (see voiding record) (& Voiding Protocol from Day & Eve shifts)	☐ **Pericare** BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present Catheter N/A Secure and Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op prescription ☐ If urine output is <30 ml in one hour, notify in-Charge Nurse who will contact on-call fistula surgeon ☐ Voiding Protocol N/A ☐ <4 hours after catheter removed: bladder scan within 10 mins of void to determine post –void residual (PVR) ☐ Notify Charge Nurse if PVR>150mls or s/s of retention: decreasing amount of voids, dribbling urine, suprapubic pain ☐ Ensure Oxybutynin discontinued	☐ **Pericare** BID when vaginal pack removed ☐ non-sterile ☐ sterile, incision present Catheter N/A Secure and Patent ☐ Irrigate catheter with normal saline PRN if obstruction suspected. Irrigate per protocol on post-op orders ☐ If urine output is <30 ml in one hour, flush as above and notify Charge Nurse who will contact on-call fistula surgeon ☐ Voiding Protocol N/A ☐ <4 hrs after catheter removed: bladder scan within 10 mins of void to determine post –void residual (PVR) ☐ Notify Charge Nurse if PVR>150mls or s/s of retention: decreasing amount of voids, dribbling urine, suprapubic pain ☐ Ensure Oxybutynin discontinued
Wound Care	☐ N/A ☐ Dressing intact ☐ Dressing changed _____ _____ _____	☐ N/A ☐ Abdominal repair: ☐ OTA ☐ Dressing clean, dry, & intact ☐ Dressing changed Prescriptions _____ ____ _____	☐ N/A ☐ Abdominal repair: ☐ OTA ☐ Dressing clean, dry, & intact ☐ Dressing changed Orders _____ _____
IV & Medication	☐ VIP Score_____ (score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula	☐ VIP Score_____(score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per presecription for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum	☐ VIP Score_____(score>2, remove and restart IV) ☐ Flush IV cannula end of shift ☐ No IV cannula ☐ Oxybutinin per order for suspected bladder spasm. **DC 24 hours before catheter removed** ☐ RVF: Nothing per rectum
Activity and Safety		☐ Encourage ambulation ☐ Other _____ _____	☐ Encourage ambulation ☐ Other _____
Nutrition and Fluid Balance	☐ **6:00 am** water bottle filled to: _____ ☐ Catheter: 1500 ml ☐ Voiding: 750 ml ☐ **6:00 am** Total Input & Output ☐ & 24 hour Total	☐ Regular ☐ Other _____ ☐ **12:00 noon** Water bottle filled to 1000 ml ☐ Catheter: 1000 mls ☐ Voiding: 750 ml ☐ **12:00 noon** Total intake and output	☐ Regular ☐ Other _____ ☐ **12:00** noon Water bottle filled to 1000 ml ☐ Catheter: 1000 mls ☐ Voiding: 750 ml ☐ **12:00** noon Total intake and output
Nursing Notes	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____

APPENDIX IV: General Logbook

General Logbook					
SN	**Date**	**Description of case including hospital and patient #**	**Observation or assisted Direct Supervision Independent practice**	**Comments**	**Trainer signature (if applicable)**

REFERENCES

1. UNFPA, *Landscape Analysis of Sexual and Gender-Based Violence, Harmful Practices and Obstetric Fistula in Nigeria*. 2022, UNFPA: Abuja.
2. FMOHSW: *National Strategic Framework for the Elimination of Obstetric Fistula in Nigeria 2019 - 2023.* Abuja: 2019. p. 65.
3. Elneil, S. *Global Competency-Based Fistula Surgery Training Manual*, S. Elneil, Editor. 2021, FIGO and Partners. p. 221.
4. United Nations General Assembly, *Intensification of efforts to end obstetric fistula*. 2020, UNGA: Geneva.
5. Federal Ministry of Health and Social Welfare: *Standard of Practice on Obstetric Fistula in Nigeria Doctor's Version*. Abuja: 2011.
6. Federal Ministry of Health and Social Welfare: *Standard of Practice on Obstetric Fistula in Nigeria Nurses' Version.* Abuja: 2011.
7. Lengmang S.J, Degge H. *Characteristics of obstetric fistula in Kaduna Metropolis.* Open Journal of Obstetrics and Gynaecology, 2017. 7: p. 734-741.
8. Mark AB, Widmier M, Steven A, Joseph R, Armando S, Evelyn L et al. *Breakdown of simple female genital fistula repair after 7 day versus 14 day postoperative bladder catheterisation: a randomised, controlled, open label, non-inferiority trial*. The Lancet, 2012. 386(9988): p. 56-62.
9. FMEC, FMOHSW; National Healthcare Waste Management Policy, 2013, FMEC, Abuja
10. FMOHSW;, *National Protocol for Rehabilitation of Women Pre and Post Obstetric Fistula Repairs.* 2022, FMOHSW: Abuja.

FURTHER READING

FMOHSW; *Guidelines on Urethral Catheterization for Prevention of Obstetric Fistula in Nigeria.* Abuja: 2015.p. 33.

Waaldijk, K., *The immediate management of fresh obstetric fistulas.* American Journal of Obstetrics and Gynaecology, 2004. 191: p. 795-9.

Breen, M., *Manual of Obstetric Fistula Surgery.* 2019, The Foundation for Global Library for Women's Medicine: Albyfield. p. 185.

Ministry of Health and Population. *Management of Obstetric Fistula for Health Care Providers - On the Job Training.* Kathmandu, Nepal: 2015. p. 117.

Centre for Disease Control. *Guideline for Isolations: Preventing Transmission of Infectious Agents in Healthcare Settings.* 2007.

WHO. *Safe Management of Waste from Waste from health-care Activities.* 2014, WHO.

UNFPA. *Obstetric Fistula and other forms of female genital fistula: Guiding principles for clinical management and programme development.* 2020, UNFPA: New York. p. 140.

Ojengbede O.A, Moharson I.O, Shittu O, *One stage repair for combined fistulas: Myth or reality?* International Journal of Gynaecology and Obstetrics, 2007. 99(1).

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