National VVF Project Nigeria

evaluation report XXVIII

2011

state of the art surgery
evidence based results
ground breaking research
peer reviewed science
complete documentation
long-term follow-up

kees waaldijk  MD PhD
chief consultant fistula surgeon
sponsored and financed by:

**waha-international**

paris

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babbar ruga national fistula teaching hospital
katsina
nigeria
National VVF Project Nigeria

evaluation report XXVIII

2011

Nigeria

Ebonyi State University Teaching Hospital
ABAKALIKI

Special VVF Center
B/KEBBI

Faridat Yakubu VVF Hospital
GUSAU

-General Hospitals
- HADEJIA - JAHUN

Laure Fistula Center
KANO

Babbar Ruga Fistula Hospital
KATSINA

Federal Medical Center
NGURU

Maryam Abacha Hospital
SOKOTO

Kofan Gayan Hospital
ZARIA

République du Niger

Centre Hospitalier Départemental
MARADI

Hôpital National
NIAMEY

Maternité Tassigui
TAHOUA

Maternité Centrale
ZINDER

kees waaldijk  MD PhD
the (surgical) management of the obstetric fistula has to start the moment the leaking of urine becomes manifest

no need to become an outcast
the immediate management by catheter and/or early closure is highly successful and will prevent the woman from becoming an outcast

the best way to treat the whole patient is by closing the fistula
do not waste time, energy and money on things which make no sense concentrate on the most important thing: close the fistula

previous repairs, scar tissue, vagina strictures etc do not influence the outcome of surgery only surgical principles and surgical techniques with the surgeon being the most important

in der beschränkung zeigt sich der meister

the minimum has to be done to the best of knowledge, experience, skills and conscience
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pelvis
working in isolation and without high-tech is not easy but clinical examination (a gift lost in the industrialized world) gives the privilege of studying the complex obstetric trauma in all its aspects with theoretic and practical solutions for the whole world

slowly things we have been propagated are getting a broader attention and we trust this trend will continue

documentation and reporting by professionals about their work are essential tools in assessing and evaluating processes and projects

this report is no 28 in a series of consecutive annual reports since the author started his obstetric fistula work from scrap in december 1983

it gives an impression of what has been done during the year 2011, more is not possible, in terms of (surgical) management of the obstetric fistula with evidence-based results, in terms of training, in terms of workshops, in terms of politics etc

besides this, it gives the overall figures over the 28-year period 1983-2011

the enormous number of patients treated and the rare complete documentation of everything combined with excellent evidence-based result in long-term follow-up gives this project the authority to tell sensible things about: classification, operation techniques, training materials, research, training of all kinds of (para)medical professionals, setting up vvf-repair and vvf-training centers etc

there is no need to speculate or assume certain things without any proof using complicated statistical methods which nobody understands, just analyse the figures using common sense and it becomes clear

if the findings differ from other opinions it is because this report is all about original work by professional surgeons in the field using objective parameters and not a so-called analysis by verbal surgeons in the usa of “fabricated data” as stolen from the fieldworkers

lastly, since we consider our work public domain anybody in the world is welcome to see for him(her)self what is being done in the project; nothing beats transparency

the importance of training and (training) workshops are being stressed together with the stress upon the trainer

updates of existing materials have been used to show the gradual development
arcus tendineus fasciae = atf
executive summary

at the **54th national health council of Nigeria** babbar ruga hospital was nominated as the national fistula hospital for treatment, training, research and documentation; as such the responsibility for the center will shift from katsina state government towards the federal government in the near future

the **strength of the program** is that everything is **evidence based** by meticulous documentation, extensive database, prospective research, individual follow-up over years and consequent analysis of the results according to scientific parameters

there were many and long-lasting strikes throughout the year affecting our project

during the year a total of 2,502 VVF/RVF-repairs were performed in the project making **a grand total of 37,084 repairs**

during the year a total of 28 doctors and 28 nurses attended our training programs enacting the guidelines of the global competency-based international manual making **a grand total of 806 trainees: 375 doctors, 360 nurses/ midwives and 71 other persons**

during the year 10 workshops, of which 5 especially designed for training, were executed making **a grand total of 46 workshops**

**scientifically**, the classification of vvf/rvf, the theoretical insight in the pelvis (floor) anatomy and the operation techniques as based upon reconstructive principles with their excellent results proved to be of evermore value

the first number of the international journal of obstetric trauma **ijotr** was published on-line giving fieldworkers the opportunity to report about their personal experience

we considered katsina, kano and zaria as our core centers with an inter-center distance of up to 250 km and the other centers more as the periphery with a distance ranging from 450 to over 1,000 km

a **holistic approach** is evidence-based possible as shown in kofan gayan hospital in kaduna state

the whole project is government owned; as such 95% is being financed by the respective state governments and by the federal government

however, it would not have been possible to execute the whole programme without the help of **waha-international** our sponsor for the running costs not covered by the government

it has to be stressed that these achievements are only due to **teamwork** and the **combined efforts** by all the doctors, nurses and other personnel in all the centers
arcus tendineus levator ani muscle = atl
evaluation report XXVIII

introduction
the obstetric fistula is as old as mankind and constitutes a social disaster of the highest order; due to the continuous urine leakage with offensive smell these patients are ostracized from their own community if nothing is done and lose all dignity, as a woman and as a human being, with progressive downgrading medically, socially, emotionally and mentally the variety of the complex trauma of the obstetric fistula is enormous: from a minute fistula with minimal tissue loss to a cloaca in an empty pelvis with extensive intravaginal lesions and (sub)total loss of all the intrapelvic tissues, extravaginal lesions, urine-induced lesions, neuro-logic lesions and systemic lesions

the only rehabilitation into society is by successful closure of the fistula; however, this is not simple considering the extent and the immense variety of the trauma though prevention of the obstetric fistula is not possible for another century, prevention of the social disaster is very well feasible by the immediate management by catheter and/or early closure; no need to become an outcast

this VVF Project aims to have an impact by providing a VVF-repair service, by establishing VVF centers, by training all kinds of doctors, nurses and paramedical personnel and by providing training materials with the emphasis on keeping it simple, safe, effective, feasible, sustainable and payable under African conditions

philosophy of the project

to provide a professional service concentrating upon the immediate (surgical) management of the obstetric fistula patient
to bring the service towards the patients which means multiple “small” repair centers within their own community throughout Africa and not a single white elephant in the capital to work for or in close collaboration with the government in order to have an impact upon the obstetric fistula as a major public health problem
to ensure optimal comprehensive care: repairs by the surgeon and rehabilitation if needed by the social workers in close cooperation
to concentrate on the repairable fistulas and especially on the immediate management as a priority considering the scarcity of human resources, finances and available infrastructure to make a clear statement during the whole management process about further surgical interventions; it does not make sense to operate forever on the incurable patients to demarcate the responsibilities: once the surgeon has done his job <closure of the fistula to the best of his knowledge, conscience and expertise> in the end it is the patient herself who is responsible for her life; the surgeon is just the surgeon, nothing more; and the surgery alone consumes all his energy

long-term objectives
to establish a lasting VVF service with ultimately the total eradication of the obstetric fistula, first in Nigeria but later on also in the rest of Africa and the whole world to keep the existing expertise available for present and future fistula surgeons

short-term objectives
to further upgrade the repair and training services in the existing centers and to start new centers; masterplan: to establish a VVF-repair center in each of the 36 states of Nigeria and to have a VVF-training center in each of the 6 geopolitical zones of Nigeria; with a population of at least 170 million people to train doctors, nurses and other health personnel in the complicated (surgical) management of the obstetric fistula to produce training materials and surgical handbooks with in-depth description of anatomic tissue losses, classification of vvf and rvf, description of continence mechanisms, immediate management, step-by-step operation techniques of fistula and (postrepair) intrinsic/stress incontinence etc to conduct clinical scientific research, to establish a comprehensive database and to prepare evidence-based scientific articles
achievements

individual VVF-repair centers
during the period 1984-2011 we were instrumental in establishing and maintaining 9 vvf-repair centers in nigeria and 4 in république due niger; and in establishing 2 functioning vvf-training centers in nigeria
our efforts to set up a new center in ningi in bauchi state failed

activities
there were many and long-lasting strikes during the year, especially in katsina state, which affected/obstructed our work
a series of intensive training workshops were executed in katsina, kano and abakaliki

surgery
over the year a total of 2,502 procedures were performed in the 13 different centers making
grand total of 37,084 operations: 33,646 VVF-repairs and 3,438 RVF-repairs

postgraduate training
over the year a total of 28 doctors and 28 nurses/midwives were trained making a
grand total of 806 persons: 375 doctors, 360 nurses and 71 other persons

workshops
the consultant surgeon + team participated in 10 workshops in katsina, kano, nguru, sokoto, birnin kebbi, maradi and zinder making a
grand total of 46 workshops

research
this is a continuous process; the intention was, is and will be to make complicated things simple, safe, effective, feasible, sustainable and payable under African conditions sticking to reconstructive surgical principles
… and we were able to develop evidence-based solutions for each and every problem
our best contribution is the immediate management by catheter and/or early closure preventing the woman from becoming an outcast
the scientific classification of vvf/rvf becomes ever-more valuable the longer we use it

database, documentation and science
a comprehensive database has been developed where the chief consultant has entered his personal obstetric fistula experience consecutively from the very first to the last patient with up to 250 parameters per patient
the chief consultant started with updating his electronic operation reports by drawings and all postoperative check-ups/results in order to place them on-line on the web for everybody to make his own analysis and conclusions

state-of-the-art surgery
each fistula needs its own specific customized approach as based on a careful assessment of the qualitative and quantitative amount of tissue loss: a combination of science and art based upon a scientific classification state-of-art operation principles and techniques have been developed for each type with evidence-based prognosis as to healing & continence

export of expertise to the industrialized world
it is high time to export our evidence-based experience to the industrialized world

funding
basically the project is funded by the Federal Government and by the individual State Governments but this is not sufficient
further support came from several organizations like service to humanity foundation, usaid-acquire, unfpa, mdg and family care
luckily, we could depend reliably upon our major sponsor for the running costs from 2010 onward in waha-international
strength of the project
its rare meticulous evidence-based complete documentation by individual electronic
systematic examination and operation reports, electronic database with almost 4,000,000
entries, real prospective research, more than 150,000 digital and other photographs, some
50 hours of digital video takes of operation techniques, long-term follow-up over years, real
scientific classification and 28 annual reports etc etc for the whole world to see

conclusion
though there is continuous improvement in the quantity and quality of this project in terms of
service, training and research there is a long and difficult road in front of us
to move things forward the major aid organizations have to concentrate upon setting up their
own centers in places where there is no service instead of invading existing projects abusing
the obstetric fistula for their main aim/goal, i.e. hidden agenda of family planning

prevention
why are the major aid organizations, the governments and the general public not interested
in establishing a network of functioning obstetric units ???
verbal propaganda has not prevented/cured a single obstetric fistula though it has generated
lots of money to do so ???however, what has happened to the pots of money??

kees waaldijk MD PhD
chief consultant surgeon 31st of December 2011
### Fistula Surgery 1984-2011

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**Total VVF-repairs and related operations:** 33,503 + in workshops 143 = 33,646

**Total RVF-repairs and related operations:** 3,398 + in workshops 41 = 3,438

**Grand total** 37,084

**Success rate at VVF closure:** 90% per operation

**Success rate at RVF closure:** 85% per operation

**Wound infection rate:** < 0.2%

**Postoperative mortality rate:** < 0.2%

**Final success rate** (after one or more operations): > 97%

**Final severe incontinence rate** after successful closure: 2-3%
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average of more than **750 personal repairs a year** over a **28-yr period**
obstetric fistula training 1989-2011

in sharp contrast with many things, if one wants to learn the **science and noble art of obstetric fistula surgery** this cannot be done in the USA but one has to come to Africa where the action is together with the real expertise in the hands and minds of the few dedicated fistula surgeons

though the majority of the trainees come from Nigeria and other parts of Africa, we have them also from USA, Europe, Asia and Australia; so from all the 5 continents

however, the training poses an enormous stress upon the trainers; see obstetric fistula surgery training logbook where

for guidelines, the **global competency-based training manual** has been used during our intensive training sessions

**a grand total of 806** doctors, nurses/midwives, other highly educated persons and paramedical staff were trained/attended one of our training programs:

- a total of 375 **doctors**
- a total of 360 **nurses/midwives**
- a total of 4 **other academic persons**
- a total of 7 **medical students**
- a total of 20 **paramedical persons**
- a total of 40 **social workers**

the main question is what exactly do we want: ??quality or quantity??

we hope that the **training committee** of ISoF will evaluate and accredit the capacity of trainers and training centers in the world since it is unfair that few trainers and training centers carry the heavy burden of obstetric fistula training

we are in a continuous process of updating our training materials

however, with our experience it does not make sense to train beginners anymore as that would be a waste of our hard-obtained evidence-based expertise

we would like to concentrate upon **training of trainers**, consultants/specialists who have performed already some 400 repairs

learning a trick which is how we all start is not sufficient since it is solid understanding of the anatomy and physiology of the pelvis, pelvis floor, urine/stool continence mechanism, and the principles of surgery, septic surgery and reconstructive surgery combined with compassion that counts
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cervix with sacrouterine ligament = sul
National VVF Project Nigeria
obstetric fistula surgery training

training of 22 doctors and 27 nurses

5 training workshop sessions of 14 days of 4-6 doctors and 4-8 nurses each

under mdg funding

Babbar Ruga National Fistula Teaching Hospital
Katsina

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

kees waaldijk MD PhD

chief consultant surgeon

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during the 5 training workshops executed so far over 66 training days

a total of 384 step-by-step operations have been performed however, only 12 fistulas suitable for trainees

52 clinical and 48 classroom lectures were delivered

22 doctors and 27 nurses followed our introductory course to the complex trauma of the obstetric fistula

by the end of the training all the patients in the hospital had been attended to and not a single one was left on the waiting list

stress upon the chief trainer surgeon 800 hours minimum private teaching, organization, documentation reporting
obstetric fistula surgery training
session 1 + 2 + 3 + 4 + 5

executive summary

considering the short-term 14-day training programme annex workshop this can only be considered as an **intensive exposure** to the **complex trauma of the obstetric fistula** and an **introduction** to the **noble art** of its (surgical) management.

each session consisted of 14 consecutive days of recap of the previous day, ward-round, surgery with clinical lectures, questions and answers and classroom lectures, selection of patients and postoperative wardround.

at the beginning of the course all the trainees were handed out a cd-rom with 5 books about the obstetric fistula, the global competency-based training manual, a logbook and a questionnaire for active participation, self-study and self-evaluation.

since there are 2 operating tables available 2 trainee doctors and 2 trainee nurses were assigned to each table and to one of the 2 operating surgeons.

the whole training was executed according to the guidelines of global competency-based training manual.

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook.

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice.

the **good news** is that they were all highly interested, very cooperative and really doing their best to pick up.

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female.

the most important lesson they learned was: **immediate** bladder catheterization the moment the leaking of urine becomes manifest.

and all of them understood very well that they have to come forward for proper surgical training before they are able to start their own obstetric fistula surgery.

the whole training exercise was documented meticulously, e.g. prospective computerized operation reports with prediction as to healing and continence.

a **total of 22 doctors** and **27 nurses** attended these sessions, a **total of 384 operations** were performed and a **total of 52 clinical and 48 classroom lectures** were delivered with emphasis on the obstetric trauma in its broadest sense.

total time spent by the chief consultant **800 hours private teaching/organization**.
obstetric fistula surgery training

**first session as pilot**
Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants and 4 nurses
from monday 30.05 thru sunday 12.06

**second session**
Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 4 consultants and 5 nurses
from monday 27.06 thru sunday 10.07.11

**third session**
Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants and 8 nurses
from monday 11.07 thru sunday 24.07.11

**fourth session**
Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 6 consultants/doctors and 4 nurses
from monday 12.09 thru friday 23.09.11

**fifth and last session**
Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 consultants/doctors and 6 nurses
from monday 17.10 thru friday 28.10
as based on our 35,000 repairs with evidence-based success of 97-98% at closure and the training of 350 doctors and 340 nurses since started in 1984,

we were approached by mdg to train 20 doctors and 20 nurses in the basics of the obstetric fistula and its (surgical) management during a training programme of 14 days

we set out a strategy for this novel type of training to make the most of it and we came up with an intensive training course of some 120-140 hours of theoretical lectures and practical surgical sessions whereby the quality to our patients and to our training will be guaranteed; see annexes

it should be considered an intensive exposure as an introduction to the complicated complex trauma of the obstetric fistula and its (surgical) management

for this we will follow the internationally approved/accepted global competency-based training manual as state-of-the-art guidelines

throughout the training course the accent will be on the quality and not on the quantity; for this we plan 3 operations per operating bed for 12 days; that will be 72 operations during the 2 weeks of training; or a total of 360 operations during the 5 sessions of 2 weeks

continuous monitoring will be provided by mdg, fmoh and ktmoh

a comprehensive evaluation report will be produced at the end of each 2-week training session and for the whole training programme
obstetric fistula surgery training

training module etc etc

day-to-day outline of the programme

day 1
opening ceremony, introduction of participants, explaining the training to all participants and questionnaire for self-evaluation, tour of the center, introdutional lecture about the obstetric fistula in its broadest form

day 2-13
8.00 to 9.00  wardround
9.00 to 14.00 surgery, examination etc
14.00 to 1500 lunch etc
15.00 to 17.00 theoretical lectures, questions & answers about procedures etc
17.00 to 18.00 wardround

day 14
wardround, ?surgery?, explaining the initial questionnaire for self-evaluation, handing out the certificates, evaluation of the programme by trainers, trainees and sponsors, closing ceremony

content of training
history taking, examination, preoperative care
pre-anesthesia care, spinal anesthesia
step-by-step surgery with explanation of the whole complex trauma of the obstetric fistula customized to the individual patient
postoperative care
health counselling right from the beginning when the patient presents herself

training process
2 operating beds with each a trainer + 2 consultant trainees
chief consultant surgeon as supervising the whole process of training: practically and theoretically

self-study by the participants:
study material for the trainees on their own; before starting each trainee will be given a cd-rom with the following:
(surgical) management of bladder fistula in 775 women in Northern Nigeria; phd thesis; 1989
step-by-step surgery of vesicovaginal fistulas; 1994
obstetric fistula surgery; art & science; 2004
25 years of obstetric fistula surgery; report XXV for the years 1984-2008
national vvf project report XXVII for the year 2010

presurgical examination
to confirm fistula, pudendal nerve function + peroneal nerve function, general health, hydration, blood pressure
spinal anesthesia
3 ml heavy bupivacaine 0.5% at L4/L5
monitoring

examination under anesthesia just before surgery is started
all the obstetric intravaginal lesions to be demonstrated, then based on this the fistula is classified, surgical plan of action outlined and performed/demonstrated and prognosis given as to healing and as to continence in 5% range

questions & answers
after each surgical procedure

classroom lectures:
pelvis and pelvis floor anatomy
urine continence mechanism in the female
stool continence mechanism in the female
the complex trauma of obstetrics in relation to pelvis and pelvis floor
immediate management by catheter and early closure
classification of urine fistulas as related to the obstetric trauma
classification of stool fistulas as related to the obstetric trauma
principles of surgery according to classification with prognosis as to closure and continence
urine incontinence as related to defects in the pubocervical fascia with consequences for continence surgery
genuine urine incontinence as related to defects
prevention of postrepair incontinence with reconstructive steps during the repair
conservative management of postrepair incontinence
reconstructive surgical management of postrepair incontinence
preoperative preparation
the importance of high oral fluid intake pre- and postoperative
spinal anesthesia

data collection and data management
since data are very important in monitoring and the management and the project as a whole, special emphasis will be placed on how to collect which data and how to manage the data

training modules
during the whole training period the isofs-figo-rcog manual will be used as objective standard of international state-of-the-art training in a prospective way also to test the manual in a critical way

training time
since the training will be 10 hours a day for a full 14 days this will amount to 120-140 hours of individual training which is comparable to 4 week-training of 35 hours per week compressed within 14 days

at the very end the same questionnaire will be explained for self-evaluation by all participants
obstetric fistula surgery training

prepared and adapted for
training manual meeting 10th thru 12th august 2011
dar es salaam
tanzania

guidelines

kees waaldijk, MD PhD
chief consultant fistula surgeon

copyright the author
1st edition: november 2003
2nd edition: april 2005  prepared for unfpa meeting in niamey
3rd edition  august 2011
The obstetric fistula as a major public health problem

the need for training

The obstetric fistula is a major health problem on the rise for which a definite solution still has to be found; some 1,500,000 patients are desperately waiting for operation. Prevention is a utopia for at least another century since a network of 150,000 functioning obstetric units are needed evenly distributed over the inhabited parts of Africa where day and night an emergency caesarean section can be performed upon arrival of the patient, with an even more concentrated network to detect the first sign of obstructed labor; that is the lesson learned from history in the industrialized world; what about delay in diagnosis of obstructed labor, in decision taking and in transport?
Prevention of the woman from becoming an outcast is very well feasible, even under primitive conditions, by the immediate management by catheter and/or early closure. Once the fistula patient has become an outcast, rehabilitation is only by successful closure of the fistula which means secondary/tertiary health care.

The best we can aim for at the moment is to spread the expertise how to manage the obstetric fistula confidently within the scarce resources of developing Africa; and once available to keep this expertise where it is needed for as long as needed.
For sustainability reasons, the management of the obstetric fistula has to be simple, safe, effective, feasible, affordable and payable.
However, there are only 2 training centers in the world where systematically doctors, nurses and other health personnel are trained in the management of the obstetric fistula.

Since manpower, expertise, facilities, equipment, training materials and finances are scarce, it will take some time before an impact can be expected.

Some ideas on how to proceed are presented in separate chapters:

obstetric fistula training and trainees
training curriculum
training module
obstetric fistula training center
obstetric fistula repair centers
obstetric fistula rehabilitation
nation-wide obstetric fistula service
obstetric fistula tourism
training of industrialized world
training of non-doctors

Besides this the obstetric fistula has to be integrated within the government health system as a major public health problem with a national program; also (inter)national donor agencies have to be involved
obstetric fistula training and trainees

introduction
In order to cope with the increasing number of obstetric fistula patients in the developing world it is important to train sufficient doctors, nurses and other personnel. The doctor trainees need at least 10 repairs under strict supervision, from placing the patient on the operating table until the very end of the operation. Future trainers need personal exposure to the complicated and difficult fistulas in order to train other doctors in the noble art of fistula surgery. They have to become completely familiar with all kinds of fistulas and all kinds of operations. For nurses and other health personnel it is sufficient to have an intensive exposure to the obstetric fistula combined with practical and theoretical lessons.

different training courses
a. training course for doctors without experience in fistula surgery
b. training course for consultants without experience in fistula surgery
c. follow-up advanced training courses in obstetric fistula surgery
d. training course for future doctor trainers with sufficient experience
e. training course for operation theater nurses
f. training course for pre- and postoperative nurses
g. training course for anesthesia nurses
h. training course for future nurse trainers with sufficient experience
i. refresher courses for nurses
j. training course for supporting staff and other (health) personnel
k. training course for doctors and staff from the industrialized world

requirements of doctors
A trainee must have a surgical experience of at least 3 years in order to learn the basics of obstetric fistula surgery. (S)he does not need to be a consultant but (s)he must be interested in the work and not in the money of the training course.

requirements of future trainers
To become a future trainer, in principle the trainee should be a consultant and have already a personal experience of at least 400-500 repairs and he must be prepared to become a full-time fistula surgeon.

requirements of nurses/midwives or anybody else
A trainee must be working with obstetric fistula patients and be willing to continue to do this. So any trainee should be screened well by his (her) employer and by the sponsoring agency.

duration of training
For doctors without or with low experience in fistula surgery a period of 1.5-2 months will be sufficient if there are enough patients for them to operate upon; after 50-100 personal repairs, they can be trained again for 1 month. For nurses and other (health) personnel a period of 1 month will be sufficient if there are enough patients available. For future trainers the best would be an initial period of 1 month, then again 2-4 weeks after some 6 month and if necessary again 2-4 weeks after 6 months.
training curriculum for doctors and nurses

the problem is that fistula surgery looks so simple, so everybody involved in gynecology is a fistula surgeon, and turns out to be so difficult

another problem is that surgery cannot be learned from a textbook or a theoretical lecture or a workshop but only by performing the surgery oneself under supervision of an expert fistula surgeon in a sufficient number of patients

however, before starting with the (surgical) management the trainee must learn and understand first the mechanism of obstructed labor, the complex trauma of the obstetric fistula, the complex anatomy of the pelvis and intrapelvic organs and their different tissues, muscles, ligaments etc and the theoretical solutions

once the doctor-trainee masters all the theoretical aspects, his practical training can start and step-by-step he has to be taught the (surgical) management of the obstetric fistula

though the nurse-trainee does not perform the surgery, (s)he must be familiar with all the surgical techniques and all the other theoretical and practical aspects

complex trauma of the obstetric fistula
the enormous variety of the obstetric fistula and other intravaginal, intrapelvic, extravaginal and systemic lesions due to obstructed labor

anatomy of the pelvis
the pelvic bones, the intrapelvic organs and their relation

urine/stool continence mechanism in the female
anatomy + physiology of continence

history taking
parity, duration of leakage, previous repairs etc

examination of obstetric fistula patients
inspection, vaginal examination and examination of other lesions

classification of the obstetric fistula
based on the quantitative and qualitative amount of tissue loss of the continence-closing mechanism with consequences for the operation technique and prognosis

immediate management of the obstetric fistula
by catheter and/or early closure

preoperative preparation
laboratory, high oral fluid intake, hygiene

spinal anesthesia
technique, monitoring and complications

surgical techniques
basic techniques for the different fistula types and their adjustment for that specific fistula + other techniques for stress incontinence, bladder stone, vagina atresia etc

handling of surgical instruments
this is difficult inside the vagina and needs expert coaching
**intraoperative complications**
ureters, hemorrhage, stool contamination etc

**postoperative care**
catheter management, high oral fluid intake etc

**immediate postoperative complications**
anuria, blocked catheter, secondary hemorrhage

**continence mechanism in the female**
theoretical aspects with practical (conservative and surgical) consequences

**management of long-term sequelae**
urethra stricture, bladder stone, vagina atresia, secondary amenorrhea

**postrepair total urine intrinsic stress incontinence**
bladder drill, urethralization_fasciocolposuspension

**how to set up a VVF-repair center**
in an existing hospital

**how to set up a VVF-training center**
in an existing VVF-repair center

**counseling**
personal hygiene, when to start sexual intercourse, subsequent pregnancies and deliveries

depending upon their theoretical knowledge, their surgical skills and their surgical experience, it is clear that the training of each doctor is highly individual

since it takes 4-6 years to become a consultant surgeon, it is also clear that it takes a long time before one masters the **noble art of obstetric fistula surgery**

during their training course the doctor-trainees can only be taught the basic principles of obstetric fistula surgery, then with ups and downs they have to gather their own expertise by hard work

**training is a continuous life-long process which never stops**
training module
evidence-based as practiced in the national vvf project nigeria

first
selection of an obstetric fistula management team consisting of a doctor, an operation theatre nurse, an anesthesia nurse and two pre- and postoperative nurses who are interested and willing to provide a service for the obstetric fistula patients

second
training of the complete team in an established obstetric fistula training center with a high turn-over of patients and a high number of repairs for the doctor 6-8 weeks initially for the nurses 4 weeks

third
organizing a 5-day workshop to operate a large number of patients in combination with lectures as co-facilitated by the consultant trainer + team for advocacy publicity that something can be done and to start the obstetric fistula service in that area

fourth
the team starts working on its own with the simple fistulas which they must be able to handle themselves confidently after their initial training

fifth
the consultant trainer + team come from time to time for on the job training and to handle the more complicated fistulas and to select more staff for training

sixth
after 50-100 personal repairs, the doctor should come for advanced training to the obstetric fistula training center for 4-6 weeks in order to boost his expertise

seventh
the doctor continues his own surgical program and the consultant trainer + team comes from time to time for further on the job training, to assess the service and to handle the difficult fistulas

eight
at any time the doctor comes further training of 2-4 weeks whenever he thinks he needs more training

ninth
after 250-300 repairs and if feasible and if there is a need, the doctor should come to the training center for further advanced training to become a future trainer

tenth
at any time, be (s)he a doctor or already a trainer, whenever there is a need, (s)he should appeal and come for further training to the established training center

workshops have low value for the initial training but high value for (more) experienced fistula surgeons on specific topics such as postrepair incontinence and definitely value in advocacy and helping large numbers of patients within a short time.
obstetric fistula training center

introduction
In order to cope with the increasing number of obstetric fistula patients in the developing world it is important to have **functioning training centers** where present and future generations of surgeons can be instructed in the (surgical) management of the obstetric fistula. The variety of qualitative and quantitative lesions of the obstetric fistula is such that they can only be taught the basics. Since it is handwork the trainees need at least 10 repairs under strict supervision; following their training they still can operate confidently only the simple fistulas. However, only 15-20% of the fistulas are fit for the trainees, the rest is too complicated or too difficult. For nurses and other health personnel it is sufficient to have an intensive exposure to the obstetric fistula combined with practical and theoretical lessons. Following a simple calculation model the following can be demonstrated.

requirements of the trainer
For a trainer to perform well he needs sufficient experience considering the variety and the difficulty grade of obstetric fistula surgery, i.e. a minimum of 400-500 repairs. Otherwise it would be the blind teaching the lame how to cross the road. In principle the trainer must be a consultant in order to have sufficient authority within the institution, within the set-up of the (government) health care and within the region from which the trainees are coming.

requirements of supporting staff
Since it is teamwork that counts, also his supporting staff should be of high quality in order to teach the trainees, be it a doctor or a nurse or anybody else, the pre-operative care, the anesthesia, the postoperative care and the patient counseling

requirements of the training center
For a training center to function well there must be sufficient operations, at least 300 fistula repairs a year, i.e. 6 operations per week. With less than 300 repairs it will be difficult to sustain a continuous daily intensive training/teaching programme. With 300 repairs a year there are only 45-60 operations available for the trainees, or only 1 repair a week. This would mean that the center can only handle 5-6 trainees a year, and that only 1 trainee can be taught at the same time. During a training period of 2 months, a trainee will be present at only 55-60 repairs out of which he can perform 9-10 simple repairs himself. However, some will be lucky and some not since the patients are not coming evenly distributed over the whole year; the same applies to the patients with a simple fistula which can be handled by a trainee. In principle, the center should be a government-owned or a government-recognized training center where government, mission and even private doctors and nurses can attend the postgraduate courses.

on the job training of residents or other doctors in teaching or other hospitals
This takes a long time and is only possible if the trainer has sufficient experience and the number of patients is enough as explained already. It would be better to assign the residents to a real obstetric fistula repair or training center for 2 months for an intensive exposure to the obstetric fistula.
This should be a separate unit with a separate hostel, a separate ward and a separate operating theater with separate staff for pre-, intra- and postoperative care.

In the beginning it can be integrated within an existing hospital and then one fixed day a week has to be a full fistula operating day (no other operations, neither planned nor emergency); but if the number of operations are more than 150-200 a year a specific VVF center should be built.

As it is a fistula repair center it should concentrate on the surgery only, otherwise the professional surgeon and his professional medical staff are wasting their time: a surgeon and his medical staff are not social workers.

To prevent conflict of interest the hostal annex rehabilitation center should be situated outside the hospital premises, but in the neighborhood.

Once the surgical job has been finished other professional social staff have to take over the rehabilitation.

An effort has to be made to keep things simple with straightforward pre-, intra- and postoperative guidelines.

The one thing that cannot be compromised is a high-quality operating table; except for sharply curved THOREK scissors and sharp DESCHAMPS aneurysm needle no special instruments are needed.

Spinal anesthesia is safe, simple, effective and cheap since it does not need expensive equipment.

For laboratory investigations Hb and serum creatinine would be advisable; urine investigation is unreliable.

X-rays are not required; even if the X_IVP would show abnormalities this does not mean that the patient cannot be operated.

Physiotherapy is something for the rehabilitation center but only if fixed contractures have developed; immediate mobilization is the best to prevent them.

The treatment of obstetric fistulas should be free of charge but the patient should bear some of the costs.

In order to bring the service towards the patients it is better to have multiple small centers than one large center in a country especially since the action radius of an obstetric fistula repair center is 100-120 km. In planning a nation-wide service this should be taken into account.
Rehabilitation means: prepare/help the patient to take full control of his/her life ... and does not mean: make the patients depending upon the service depriving them of their own responsibilities, that is the wrong approach and has nothing to do with rehabilitation.

The best rehabilitation is a successful repair; then it will take place spontaneously.

Only the “incurables” (after multiple repairs which did not stop the continuous urine leaking, be it a residual fistula or total postrepair urine incontinence) need vocational training in order to earn their own living. Though for these unfortunate girls/women life has ended, someway somehow they have to continue.

This is not a job for the professional surgeon and his professional medical staff but for other social professionals. Unfortunately, the social professionals are not or not yet interested.

The best would be a hostel annex rehabilitation center in the neighbourhood of a fistula repair center where the social workers could do their job. This center has to be outside the hospital, otherwise there will be a negative impact upon the functioning of the fistula repair center.

What happens if there is no separation of hospital and rehabilitation services is the following. Since the women have to survive, males come at night and visit them in the center (for some males the smell of urine seems to be an aphrodisiac; as well the women are highly attractive!), some of them fight over one woman and males and females fight the staff if they are trying to prevent them from entering the compound and break the wall if the gate is closed; many times the police has to intervene. However, if the police is asked to prevent this from happening, they take the patients as girlfriends and it is even more difficult to reverse this. As well the old patients are instructing the new patients in all types of behavior which is not in line with the hospital instructions. They have their own ideas about the pre- and postoperative management and some of them even sell native medicine to the new patients with terrible consequences. They claim the best food and the best places in the hostel for which they befriend the male staff of the hospital or bribe the female staff. That is all fine in the struggle for survival and everybody is free in doing what (s)he has to do, but for smooth running of hospital services such as obstetric fistula surgery it is not ideal.

The hostel rehabilitation center has to be in the neighbourhood of the fistula repair center for quick communication and smooth cooperation.

To avoid conflict of interest the fistula repair center has to come under the Ministry of Health and the hostel annex rehabilitation center under the Ministry of Social Welfare; however, there must be good cooperation.

However, do not convert these rehabilitation centers into fistularia since anybody must take the full responsibilities of his/her own life
nation-wide obstetric fistula service

any country with a high prevalence of the obstetric fistula should make an effort to organize and execute a nation-wide feasible and sustainable obstetric fistula service, especially since it will take another century to prevent it from occurring

in order to bring the service towards the patients (and not the other way round) and taking into account the action radius of an obstetric fistula center of 100-120 km the following is suggested to create a nation-wide network of functioning centers
one big referral center for the whole country (where patients have to travel long distances, the awareness that something can be done is low and the referral system is not functioning) is not the ideal set-up

national masterplan with national program
developed and coordinated by the national ministry of health; with its own budget

regional masterplan with regional program
developed and executed by the regional ministry of health; with its own budget

national obstetric fistula training center(s)
at least one training center and if needed more training centers depending upon the size of the country and the distribution of the health services
if the country has been divided into large geopolitical regions, each region needs its own training center
each center has to be an independent obstetric fistula hospital (not a subunit of the gynecologic department) to ensure that the patients and the trainees get first priority without interference by others
however, each center should be liaised with the (university) teaching hospital

regional obstetric fistula repair centers
each region, be it state, province or département needs its own obstetric fistula repair center, preferably in the capital of the region
this repair center should be an independent obstetric fistula hospital where only VVF and RVF repairs and related operations are performed; so no interference by others for gynaecologic operations or emergency operations such as caesarean section

incentives for the personnel
since there is no money to be made in the management of the obstetric fistula somehow the highly qualified and educated personnel have to be compensated, financially and in career planning; otherwise they will leave

step-by-step implementation
things cannot be changed overnight but an effort has to be made so that within 2-5 years each country has its own functioning service in place and then sustain it

training curriculum for residents in obstetrics and gynecology
actually each and every gynecologist should have ample knowledge of the obstetric fistula and be able to perform the simple repairs as that is his job; however, during their training they have not been exposed sufficiently and now it is too late therefore it would be better for the present and future residents to have an intensive exposure to the obstetric fistula of 2 months in either a repair or a training center instead of exposure to urology and their official curriculum should be adjusted
obstetric fistula tourism
or as a hausa proverb says
the king in one country is a beggar in another

report american sugeons’ visit to sokoto from 21/9- thru 29/9-97

for political reasons and because there was a lot of money to be shared locally amongst the organizers, the usual thing in africa, a team of american surgeons (gynecology/surgery/plastic surgery/anesthesia) from a University Teaching Hospital came to maryama abacha hospital to perform obstetric fistula surgery

though in their own surroundings they are experts, their experience in obstetric fistula surgery was zero simply because there are no obstetric fistulas in america

the chief consultant fistula surgeon offered to help and was willing to train them but they were so arrogant that they refused to talk to him since they knew it all

so they teamed up with some nigerian doctors who did not have the slightest clue as well; in total they were nine: dr e, dr b, dr h, dr k, dr k, dr b, dr g, dr v and dr b

to show off they started with the most complicated patients who had been operated already once or even more times

they worked in two teams from 9.00 am up to midnight since operation time got out of hand: from a minimum of 2 hours up to 7 hours!

on the very first day one patient died immediately afterwards, and her name was not entered in the operation register whilst all the documents disappeared (american litigation)

after 3 days the resident doctors who came to “admire” their surgical skills walked out on them though in a polite hausa way

after 6 days the remaining patients refused to be operated since they are highly intelligent and noticed that none of the operated patients were ok but started to leak already after 1-2 days; as well some of the staff advised them so

so the last two days only 1 desperate patient a day came forward to be operated

they were only interested in the surgery and did not even bother about postoperative care and follow-up and left the mess for the chief consultant and his team to be sorted out

the ‘result’ of their arrogance and obstetric fistula analphabetism is the following:

<table>
<thead>
<tr>
<th>total number of patients operated:</th>
<th>32 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>outcome:</td>
<td></td>
</tr>
<tr>
<td>early breakdown_leaking:</td>
<td>30 patients</td>
</tr>
<tr>
<td>not leaking (ureterosigmoidostomy):</td>
<td>1 patient</td>
</tr>
<tr>
<td>postoperative mortality:</td>
<td>1 patient</td>
</tr>
</tbody>
</table>

it is left to the reader to draw his/her own conclusions about the value of obstetric fistula tourism
after long deliberations the author decided to come out with this detailed report about obstetric fistula tourism since this has been repeated several times by others and it seems that some groups/organizations are planning to make the same mistake; some even think of involving the tourists in training however, neither the patients nor the tourists are helped by such an exercise it is laudable to help these poor patients but then make sure one is trained properly by expert fistula surgeons who are highly willing to do so!
training doctors and staff from the industrialized world
whilst educating the organizations

there are many doctors, nurses and other persons in the industrialized world who are very much willing to help the obstetric fistula patients in the developing world; for this they are volunteering to spend their own money (expensive air travelling, accommodation, feeding, no income), their time and their expertise; however, no experience with the obstetric fistula

there are organizations in the industrialized world willing to sponsor initiatives that will contribute to the management of the obstetric fistula patients by sending teams to operate them thinking that an expert surgeon in europe, asia, australia or united states is also an expert fistula surgeon in africa; however, they are wrong

it would be ridiculous not to make use of good-willing individuals and good-willing organizations; so we have to educate the organizations and we have to train the volunteer surgeons and staff in the (surgical) management of the obstetric fistula under rather primitive conditions in an african hospital

criteria for doctors and staff
they must have been working in a developing country for some years and willing to spend regular time (once or twice a year some weeks) in the future in a developing country; otherwise it is a waste of valuable time by the expert fistula surgeon

in nigeria the following procedure is used

first
initial visit of 2-4 weeks

Teaching the complex trauma of the obstetric fistula, inspection and examination of the obstetric fistula patients and their lesions, spinal anesthesia and some personal vaginal repairs depending upon how long they stay

since most of them are already expert surgeons they do not need the intensive coaching of instrument handling

at the end they all say they never knew and never realized how complicated the surgical management of and how extensive the obstetric fistula trauma is

second

after their visit they know which fistulas they can handle themselves and which not, and now they can start with their surgery in order to gather their own expertise

third
follow-up visit of 2 weeks

after some 50 repairs they come back to discuss their experience and to upgrade their skills, if they feel they need it

fourth

they continue their work also operating the more complicated fistulas, and at any time they can come back if there is a need for advanced-level fistula surgery

fifth
follow-up visit of 2 weeks

actually one highly experienced urologist wants to come back for the fourth time
surgical training of non-doctors or even non-medical persons

discrimination and hypocrisy

there is a debate over the training of clinical assistants or even non-medical persons

first, do not start a practice in africa which one never would accept in europe or the usa; are africans not human beings who deserve the best

then, obstetric fistula surgery is the most difficult and complicated surgery i ever encountered in my life; so it needs the right education to become a doctor, the right surgical training to become a specialist and then the right postgraduate training to become a fistula surgeon

this reflects in the statement by some organizations that a programme is successful if 85% closure rate can be achieved

however, what kind of philosophy and surgery is that; we should aim at 100%

learning a trick is not sufficient; one needs full understanding of the complicated anatomy and physiology of the pelvis, pelvis floor, urine/stool continence mechanism in the female etc etc; one has to know exactly what has been lost due to pressure necrosis; how to perform reconstructive surgery if the normal functional anatomy and pathophysiology are not known

only then with expert surgical skills one may be able to handle the obstetric fistula with care to full satisfaction of the patient and the surgeon

if a non-doctor is attending a postgraduate surgical course (s)he will get a licence to perform surgical malpractice

why not sponsor this non-doctor to become a real doctor first and then only if (s)he has achieved this send him/her for postgraduate training in the noble art of obstetric fistula (surgical) management; same practice as in the industrialized world

discrimination: what is good for africa is not good enough for europe/usa

lastly, the people who propagate this practice are not believing in it themselves as i have never seen a non-doctor and/or non-medical “fistula surgeon” been appointed as chief medical director of their hospital (with all the financial benefits)

(s)he can be trusted with the responsibility of invasive surgery and it is good for fund raising, but (s)he cannot be trusted with the administrative/financial responsibility of chief medical director what a hypocrisy

kees waaldijk, MD PhD

august 2011
fistulas for beginners
objective characteristics and setting standards
as based on evidence

introduction
due to vocal statements by verbal surgeons in the industrialized world and political statements by the major aid organizations, there is a lot of misunderstanding about obstetric fistula surgery and training such as the patient can be cured by a simple operation and beginners need rapid hands-on training for a short period however, there are no simple fistulas considering the complex trauma of the obstetric fistula and the enormous variety in tissue loss; it only may look simple in the hands of the few experienced fistula surgeons still one has to start somewhere and there are vesicovaginal fistulas suitable for beginners as based on objective findings as to size, location, tissue quality, mobility of fistula/tissue/cervix, width of pubic arch, depth of vagina, concomitant rectovaginal fistula/sphincter ani rupture, previous repairs etc; all the characteristics of a small type IIa fistula are outlined in order to help trainers and trainees second, the first priority in training is to teach and demonstrate the anatomy of the pelvis floor, the obstetric pressure gradient within the pelvis, the variety in tissue loss, a systematic examination of these lesions, a classification as based on the quantitative/qualitative amount of tissue loss and the different solutions as customized to that specific fistula only if the trainer and trainee have full understanding of all the theoretical/practical aspects, then the last thing is hands-on training under direct supervision according to the basic principles of general, urologic, gynecologic, colorectal, septic and especially reconstructive surgery to reconstruct the functional anatomy all in order to restore the normal physiology; this is not something for inexperienced surgeons

objective criteria
based upon an extensive experience of more than 21,000 repairs with excellent evidence-based results in closure of the fistula after one or more operations in more than 98% with severe incontinence in only 2-3% there are some fistulas which are suitable for beginners; the objective characteristics of which are outlined in table i with drawings in fig 1 and 2

| table i |

| characteristics of fistulas for beginners |

| size: | 0.2-1.5 cm |
| location: | midline |
| distance from euo: | 2-4 cm |
| classification | small type IIa |
| ruga folds: | intact |
| mobility: | good mobility of fistula, tissues and cervix |
| pubic arch | > 85° |
| vagina depth | ≥ 10 cm |
| previous operation | no contraindication as long as |
| no major scarring and no mutilation |
| rectovaginal fistula | no contraindication |
| no severe obesity | obesity makes any operation complicated |
fig 1 location of fistula

fistula for beginner
fig 2 several possibilities

fistulas for beginner
size
fistulas < 0.2 cm are difficult to handle and need special insight and operation
principles
location
fistulas not in the midline are difficult to handle since instrument handling and tissue
handling is complicated
distance from euo
any proximal fistula is difficult (instrument handling) and if it is too distal the delicate
urethra (main continence structure) may be traumatized
classification
small type II\text{Aa} fistulas where II means involving the urine continence mechanism, A
no (sub)total urethra involvement and a no circumferential defect
ruga folds
when the ruga folds are not intact there is far more trauma than anticipated at first
sight and one has to determine exactly the amount of tissue loss
mobility
if mobility is poor then mobilization of tissue and tension-free closure may be
compromised or even impossible; even after closure there may be traction upon the
repair, such as. when a retracted cervix (after cesarean section) is pulling on the
repair when the patient is coughing
pubic arch
if the pubic arch is < 85° then access may be poor which would make the operation
more complicated
vagina depth
if the vagina depth is < 10 cm there is already substantial tissue loss
previous operation
if operated by expert surgeon there is almost no scar tissue, however, if operated by
a surgeon without expertise there may be excessive scar tissue and mutilation
rectovaginal fistula
a rectovaginal fistula does not interfere with the operation technique or healing; a
sphincter ani rupture makes the access even better
however, beginners should not combine the vvf and rvf in one session but
concentrate totally on one at a time
severe obesity
severe obesity makes any operation complicated; if so the patient should lose weight
first before she can be operated

evidence-based results
out of the 10,529 patients operated during 1983-2010 in the 4 centers katsina, kano,
zaria and nguru where there is reliable follow-up, only 1,236 (12%) fulfilled these
criteria and were operated by the author and his trainees with the following results:
final healing in 1,230 (99.5%) as 1,221 (98.8%) healed at first attempt and another 9
at second attempt; 3 patients had a ureter fistula as well which was reimplanted
successfully at separate attempt and 4 patients did not report for 2nd attempt
out of the 1,230 patients with a healed fistula 1,223 were completely continent whilst
only 7 (0.5%) had persistent postrepair incontinence but they did not report for
incontinence surgery
training curriculum for doctors
on
(surgical) management of vesicovaginal and rectovaginal fistulas

at

Babbar Ruga National Fistula Teaching Hospital
katsina

and

Laure Fistula Center
Murtala Muhammad Specialist Hopital
kano

kees waaldijk, MD PhD
chief consultant fistula surgeon

copyright author
first edition december 1996
last edition august 2011
training curriculum for doctors on (surgical) management of vesicovaginal and rectovaginal fistulas

interview
personal introduction
professional evaluation of the trainee
purpose of training
terms of training
isofs-figo-rcog training manual
handing out teaching materials
logbook

introduction
definitions and terminology
mechanism of action
combination vvf/rvf
medical consequences
social consequences
incidence
prevalence
public health problem
history/literature review

anatomy of female pelvis
bones
pelvic floor anatomy
arcus tendineus fasciae
pubocervical fascia
arcus tendineus of levator ani muscle
levator ani muscle
  pubococcygeus muscle
  iliococcygeus muscle
  (ischio)coccygeus muscle
internal obturator muscle
piriformis muscle
sacrotuberal ligaments
sacrospinous ligaments
sacrouterine ligaments
greater sciatic foramen
lesser sciatic foramen
blood supply
innervation

physiology of pelvic floor structures

urine continence mechanism in the female
whole urethra + bladder neck 4-5 cm
anatomy of urethra
crucial role of pubocervical fascia as stabilizing factor
stool continence mechanism in the female
  internal sphincter: anorectum 4-5 cm
  external sphincter: sphincter ani
  perineal body as stabilizing factor

causes of vvf/rvf
  obstetric pressure necrosis + (surgical) trauma during labor
  traumatic surgery or other
  chemical
  infectious
  cancer
  radiation
  congenital

complex trauma of the obstetric fistula
  intravaginal lesions due to pressure necrosis
  vulva lesions due to pressure necrosis
  local extravaginal lesions due to immobilization or neurologic trauma
  neurologic lesions due to intrapelvic compression
  neurologic lesions due to eclampsia
  systemic lesions due to enormous trauma of prolonged obstructed labor
  systemic lesions due to blood loss
  lesions due to continuous urine leakage
  lesions due to restriction of oral fluid intake
  sex/condition of infant born

classification
  according to location most important
  according to size additional

consequences of classification
  operation technic principles
  healing as to closure
  healing as to continence

history taking
  parity
  how many alive
  duration of leakage
  onset of leakage
  home/hospital delivery
  sex/condition of infant
  menstruation
  social status
  yankan gishiri
  eclampsia
clinical examination
- general health status: nutrition, anemia
- vaginal examination without anesthesia
- anal reflex
  - if negative check for saddle anesthesia
- peroneal nerve trauma: grading of drop foot 0-5
- accessibility
- vagina stenosis
- urine dermatitis
- bedsores
- atonic bladder
- preliminary classification
  - can you handle it or not
  - if you are not sure, refer patient to somebody more experienced

surgical classification with regards to operation technic needed
- based on anatomic/physiologic location
  - type I
  - type IIAa
  - type IIAb
  - type IIIBa
  - type IIIBb
  - type III

laboratory investigation
- hemoglobin and serum creatinine, if possible

x-ray investigation
- none

examination under anesthesia (eua) as separate procedure
- utterly nonsense; only a money maker for people who cannot handle vvf

immediate management of fresh obstetric fistulas
- catheter
- debridement
- cleaning
- early closure
- hematinics
- high-protein diet
- immediate mobilization

preoperative preparation
- high-protein diet
- hematinics
- personal hygiene
- enema
- shaving
equipment/instruments/materials
operating table
normal vaginal instruments
special instruments: sharply curved scissors, aneurysm needle
polyglycolic acid
nonabsorbable sutures
needles

anesthesia
spinal anesthesia
long acting, bupivacaine 0.5%
level of spinal tab: normal, low, high
sitting position
head flexed anteriorly/thorax always elevated
major complications
minor complications
blood pressure before/during/after operation

position on operating table
exaggerated lithotomy position
never knee-elbow position

manpower
surgeon
instrumentating theater nurse
no assistant(s): the vagina is a one-man place!
assistants are restricting the surgeon in maneuvering his instruments

route of operation
exclusively the vagina
nb abdominal approach: skin, subcutis, fascia, muscles, fascia, peritoneum, abdomen, peritoneum, bladder and then one is in the vagina; so why do not start there immediately?? what a trauma/waste of energy!

accessibility
suturing labia minora to inner thighs
episiotomies if necessary
weighted AUVRD speculum
no retractors: one instrument inside the vagina is already a crowd! and more are hindering the surgeon in maneuvering his instruments

assessment on operating table under anesthesia
pelvis: pubic arch, AP diameter, generalized contraction etc
size of fistula in cm
location of fistula: midline, right, left
distance from external urethra opening to fistula in cm
distance from fistula to cervix/vagina vault in cm
circumferential defect: yes/no
scar tissue, texture, mobility
definite classification
make up your mind what to do exactly
make yourself comfortable/check everything before you start operating
operation technic
 check for ureters
 incision
 sharp minimal dissection/mobilization
 bladder/urethra closure: transverse/longitudinal
 static bladder capacity
 FOLEY catheter and fixation
 urethra length
 elevation of bladder neck
 vagina wall adaptation
 episiotomy closure
 no routine vagina pack
 check urine flow
 check blood pressure
 detailed operation report

postoperative care
 check for vital signs for 4-6 hr
 high (oral) fluid intake
 regular check of catheter
 immediate mobilization
 urine output: colorless like clear water
 no routine use of antibiotics
 antibiotics only on indication: generalized sepsis, pneumonia
 hematinics
 personal hygiene

surgical aftercare
 removal of episiotomy sutures after 7 days
 indwelling catheter for at least 2 wk
 if necessary (early closure) 4 wk resp. (atonic bladder) 6 wk
 catheter removal in operation theater 2-4-6 wk later
 high oral fluid intake and frequent passing of urine
 removal of nonabsorbable vagina suture 1 wk after catheter removal
 ask for leaking, incontinence and spontaneous miction
 check for healing, elevation and stress/urge incontinence
 bladder drill for incontinence

postoperative check-ups
 regularly up to 6 mth
 no sexual intercourse during this period
 continue drinking and frequent passing of urine
 ask for leaking, incontinence and spontaneous miction
 check for healing, elevation and stress/urge incontinence
 if in doubt, dye test
 the dye no lie

patient counselling
 to come back at subsequent pregnancies at 3 mth amenorrhea
 to attend antenatal care regularly
 fersolate and folic acid
 to deliver in hospital by elective cesarean section
 patient card with written instructions + operation report
documentation
extremely important for monitoring program
history
detailed operation report
check-ups
evaluation reports

prevention
no relation to tribe, religion, culture, early marriage or anything else, except for 
**early intervention by cesarean section (cs) within 3 hours**
only by establishing a **functioning network of 125,000 obstetric units throughout Africa** where **emergency cesarean section** can be performed 
**within 3 hours of labor becoming obstructed**
detection of problem patients at **antenatal care** (pelvic assessment); then hospital delivery
identifying problems by **partogram**; then **early referral for cs**

the emphasis is placed on **how to manage vvf/rvf under African conditions**.

having finished this course the candidate must have ample understanding of the complex trauma of the obstetric fistula, the obstetric fistula as a major public health problem, as well as he must be able to decide which fistulas (s)he can handle with confidence and which not

**certificate**
only certificate of attendance will be issued

kees waaldijk, MD PhD

first edition  december 1996
obstetric fistula surgery training

multiple choice questionnaire
for
self-evaluation by trainee

the trainee should fill out this questionnaire at the beginning of the training
and again at the end
so (s)he can evaluate his/her progress him/herself

kees waaldijk, MD PhD

chief consultant fistula surgeon
questionnaire I

any of the answers given might be correct or incorrect
cross the right answer(s)
read it carefully since some questions/answers are tricky

001 a fistula is a(n):
  - infection
  - malignant disease
  - genetic/hereditary disorder
  - abnormal connection between two organs
  - abnormal connection between an organ and the outside (skin)
  - congenital malformation

002 a fistula can be caused by:
  - infection
  - trauma
  - malignant disease
  - radiation
  - prolonged obstructed labor
  - congenital

003 VesicoVaginal Fistula (= VVF) is an:
  - abnormal connection between the bladder and the vagina
  - abnormal connection between the rectum and the vagina
  - abnormal connection between the bladder and the rectum
  - abnormal connection between the uterus and the rectum
  - abnormal connection between the bladder and the skin
  - abnormal connection between the rectum and the skin

004 RectoVaginal Fistula (= RVF) is an:
  - abnormal connection between the bladder and the vagina
  - abnormal connection between the rectum and the vagina
  - abnormal connection between the bladder and the rectum
  - abnormal connection between the uterus and the rectum
  - abnormal connection between the bladder and the skin
  - abnormal connection between the rectum and the skin

005 obstetric fistula is a:
  - fistula caused by advanced cervix cancer
  - fistula caused by advanced bladder cancer
  - fistula caused by advanced rectum cancer
  - fistula developed during/after labor
  - fistula developed during/after total abdominal hysterectomy
  - fistula caused by LymphoGranuloma Venereum (= LGV)
006 real cause of the obstetric fistula is:
early marriage
early pregnancy
early delivery
sociocultural practices
prolonged obstructed labor
yankan gishiri

007 mechanism of action of the obstetric fistula is:
infection
pressure necrosis
instrumentation
yankan gishiri
radiation

008 the incidence of the obstetric fistula in situations where there is no access to proper antenatal/obstetric care and the mother survives is:
roughly 5% (5 out of 100) of those deliveries
roughly 2% (2 out of 100) of those deliveries
roughly 1% (1 out of 100) of those deliveries
roughly 5‰ (5 out of 1,000) of those deliveries
roughly 2‰ (2 out of 1,000) of those deliveries
roughly 1‰ (1 out of 1,000) of those deliveries

009 there is no obstetric fistula in the industrialized world because:
the minimum legal age at marriage is 16 or 18 yr
there is no early sex and so no early pregnancy with early delivery
there is good antenatal care
there is proper obstetric care
there is no obstructed labor
there is no cephalopelvic disproportion

010 if the bladder is prolapsing through the fistula it is normally:
the bladder roof falling down due to gravity
the bladder body prolapsing
the bladder base prolapsing
bladder roof/bladder body/bladder base combined

011 fistula with a circumferential defect type IIAb means:
no connection between bladder and pubic symphysis
no connection between urethra and pubic symphysis
no connection between bladder and vagina
no connection between urethra and vagina
no connection between bladder and urethra
no connection between bladder and cervix
prolonged obstructed labor may also cause the following:

- amenorrhea
- drop foot
- vagina stenosis
- loss of pubococcygeus muscle
- loss of cervix
- urine dermatitis of vulva
- loss of labia majora
- loss of labia minora
- loss of clitoris

obstetric fistula amenorrhea is considered to be:

- physiologic during the first 6 months
- borderline from 7 to 12 months
- pathologic after 1 year

one year following the occurrence of the obstetric fistula:

- the majority of patients do not menstruate
- the majority of patients do menstruate

the incidence of obstetric fistula amenorrhea after one year is:

- > 85%
- 75%
- 50%
- 25%
- ≤ 15%

foot drop is caused by trauma to the sensory fibers of the:

- radial nerve
- sciatic nerve
- peroneal nerve
- ulnar nerve
- optic nerve

foot drop is caused by trauma to the motor fibers of the:

- radial nerve
- sciatic nerve
- peroneal nerve
- ulnar nerve
- optic nerve

in foot drop the following is affected:

- plantiflexion of the foot
- inversion of the foot
- dorsiflexion of the foot
- eversion of the foot
in fully developed foot drop the foot is in:
  - dorsiflexion_eversion
  - dorsiflexion_inversion
  - plantiflexion_eversion
  - plantiflexion_inversion

postpartum foot drop is caused by trauma to:
  - the intrapelvic plexus due to pressure of the hard fetal skull
  - the sciatic nerve at pelvis outlet due to stretching
  - the peroneal nerve at the fibula head due to direct pressure
  - the peroneal nerve at ankle level

the incidence of foot drop in obstetric fistula immediately post partum is:
  - over 80%
  - 75%
  - 60%
  - 40%
  - 25%
  - less than 20%

in grading drop foot according to the Medical Research Center (MRC) scale:
  - 0 = full function/force and .. 5 = no function whatsoever
  - 0 = no function whatsoever and .. 5 = full function/force

with time the postpartum drop foot will:
  - improve in most patients
  - deteriorate in most patients
  - stay stationary in most patients
  - recover completely in all patients

urine (ammonia) dermatitis of the vulva:
  - is a sign of the fistula
  - should be treated before any repair is undertaken
  - disappears spontaneously after a successful repair

by treating the urine dermatitis before any repair:
  - one treats a symptom and delays the real thing
  - one treats the cause and does the right thing
  - one shows insight in the problems
  - one has not got a single clue of the problems

postpartum urine leakage is mostly due to:
  - severe stress incontinence
  - fistula
  - atonic bladder
  - outflow obstruction
027 true urine incontinence means incontinence due to:
  stress
  overflow
  obstruction
  fistula
  urge

028 bladder capacity is increased in:
  fistula
  stress incontinence
  urge incontinence
  overflow incontinence due to atonic bladder
  overflow incontinence due to outflow obstruction

029 bladder capacity is decreased in:
  fistula
  stress incontinence
  urge incontinence
  overflow incontinence due to atonic bladder
  overflow incontinence due to outflow obstruction

030 if a patient develops postpartum urine leakage:
  she should be sent home and told to come back after 3 months
  then after 3 months a repair should be undertaken
  a FOLEY catheter should be inserted immediately for 4-6 weeks
  a repair should be done immediately
  the necrotic area should be excised immediately
  wait for slough to develop and then excise it
  few days after this debridement a repair should be done
  a repair should be done if the fistula edge is clean

031 if a patient develops an obstetric fistula:
  antibiotics should always be given
  antibiotics should never be given
  antibiotics should only be given on strict (non-fistula) indication,
    e.g. puerperal sepsis
  high (oral) fluid intake should be started immediately

032 giving antibiotics immediately seems:
  logical because the fistula is caused by infection
  illogical because the fistula is caused by infection
  logical because the fistula is not caused by infection
  illogical because the fistula is not caused by infection
  logical because the fistula is caused by pressure necrosis
  illogical because the fistula is caused by pressure necrosis
033 examination under anesthesia (= EUA) as a separate procedure (is):
   a sign that the doctor is highly experienced
   necessary before any repair can be undertaken
   utterly nonsense
   a money-maker for the doctor
   robs the patient of her money
   should be recommended to any doctor dealing with VVF

034 EUA should be done always:
   immediately after labor
   3 months after labor
   at the beginning of any repair
   3 months after repair
   before permission is given to start sexual intercourse after repair

035 the preferable route for VVF-repair is:
   vaginally
   abdominally
   vaginally and abdominally
   vaginally and abdominally and retroperitoneally

036 in the order stated above in question 35:
   invasion decreases
   invasion increases
   direct access to fistula decreases
   direct access to fistula increases
   operation time decreases
   operation time increases
   chances of postoperative infection decreases
   chances of postoperative infection increases
   operative trauma decreases
   operative trauma increases

037 the preferable route for RVF-repair is:
   vaginally
   abdominally
   vaginally and abdominally
   vaginally and abdominally and retroperitoneally
   colostomy only

038 the preferable anesthesia for VVF/RVF-repair is:
   inhalation anesthesia with endotracheal intubation
   infiltration anesthesia by local anesthetics
   short-acting regional anesthesia: spinal anesthesia by xylocaine
   long-acting regional anesthesia: spinal anesthesia by bupivacaine
   dissociative anesthesia by ketamine
the preferable position for VVF/RVF-repair is:
lithotomy position
R sided lithotomy position
L sided lithotomy position
knee-elbow position
L sided knee-elbow position
R sided knee-elbow position
exaggerated lithotomy position
R sided exaggerated lithotomy position
L sided exaggerated lithotomy position
flat on the operating table

the number of "sterile" persons required in vaginal repair are:
instrumentating operation nurse only
surgeon only
surgeon and operation nurse
surgeon, assistant at R side and operation nurse
surgeon, assistant at L side and operation nurse
surgeon, assistant at R side, assistant at L side and operation nurse

access to the operation field is obtained by:
traction by the assistant(s)
AUVARD speculum
liberal use of episiotomies
knee-elbow position

normally in VVF-repair the closure is as follows:
bladder/urethra transversely and anterior vagina wall longitudinally
bladder/urethra longitudinally and anterior vagina wall transversely
bladder/urethra and anterior vagina wall both transversely
bladder/urethra and anterior vagina wall both longitudinally
bladder/urethra and anterior vagina wall both obliquely

yankan gishiri fistula mostly involves:
bladder base
bladder neck
urethra
bladder roof

yankan gishiri is responsible for:
\[ \geq 40\% \] of all fistulas
30%
20%
15%
10%
\[ \leq 5\% \]
045 yankan gishiri is responsible for:
  ≥ 20% of the obstetric fistulas
  15%
  10%
  5%
  2%
  ≤ 1%

046 following VVF-repair a FOLEY catheter is inserted because:
  this prevents infection
  this decompresses the bladder
  this allows urine output to be measured
  this is easier for the patient than to urinate herself

047 the FOLEY catheter should stay in for a minimum period of:
  5 days
  10 days
  2 weeks
  4 weeks
  6 weeks

048 high (oral) fluid intake is urged since:
  it is nice to drink
  it will speed up healing
  it will prevent ascending infection
  antibiotics will penetrate better into the tissue
  it will prevent blockage of catheter
  it will dilute the urine

049 the minimum amount of (oral) fluids per 24 hours is:
  ≤ 500 ml
  1,000-1,500 ml
  2,000-3,000 ml
  5,000-6,000 ml
  8,000-9,000 ml
  ≥ 10,000 ml

050 stool pollution of the operation field is dealt with by:
  antibiotics
  meticulous closure of everything
  meticulous closure of bladder/rectum with half-open closure of anterior/
    posterior vagina wall
  dilution by large amounts of clean water
  applying disinfectants only
  immediate termination of procedure
051 a longitudinal incision into the anterior vagina wall
is recommended since all gynecologists use it in elective procedures
is physiologic
respects the natural forces in the body
is surgical malpractice

052 a transverse/semicircular incision into the anterior vagina wall
is not recommended since gynecologists do not use it
is physiologic
respects the natural forces in the body
is sound surgical practice

053 wide flap-splitting dissection
necessary; otherwise fistula cannot be closed surgically
contributes to continence
unnecessary additional trauma
is in line with general surgical principles

054 ureter catheterization
a must in every fistula repair
only in certain situations
never
a must in ureter re-implantation for ureter fistulas type III

055 function of ureter catheterization
promotes dissection
promotes closure
promotes healing
promotes continence
prevents total ligation of the catheterized ureter
facilitates identifying iatrogenic intraoperative ureter trauma

056 the real purpose of a suture is
  to promote healing
  to promote continence
  to heal tissue
  to adapt tissue only
  to close a defect meticulously

057 the preferable direction of bladder closure in type I
  longitudinal
  transverse
  oblique
  circumferential
  no preference
the preferable direction of bladder/urethra closure in type II\text{Aa}
longitudinal
transverse
oblique
circumferential
no preference

the preferable direction of bladder/urethra closure in type II\text{Ab}
longitudinal
transverse
oblique
circumferential
no preference

the preferable direction of bladder/urethra closure in type II\text{Ba}
longitudinal
transverse
oblique
circumferential
no preference

the preferable direction of bladder/urethra closure in type II\text{Bb}
longitudinal
transverse
oblique
circumferential
no preference

the preferable direction of anterior vagina wall closure
longitudinal
transverse
oblique
circumferential
no preference

closure of the anterior vagina wall
meticulous closure
adaptation only
leaving it completely open

grafting by labial fibrofatty pad, pubococcygeus muscle sling etc
contributes to healing
contributes to continence
function doubtful
non-physiologic procedure with additional trauma
critical minimum urethra length for continence
0.5 cm
1.0 cm
1.5 cm
2.0 cm
2.5 cm
3.0 cm
3.5 cm
4.0 cm

pubocervical fascia contributes to urine continence since
it consists of striated muscle tissue
stabilizes the cervix in its anatomic position
stabilizes the anterior urethra in its anatomic position
stabilizes the anterior bladder in its anatomic position
stabilizes the posterior urethra in its anatomic position
it contracts on demand and then compresses the urethra

in genuine intrinsic-stress incontinence one finds
intact pubocervical fascia
transverse defect in the pubocervical fascia
median defect in the pubocervical fascia
lateral defect in the pubocervical fascia
combined transverse/median/lateral defect in the pubocervical fascia

contribution of external sphincter ani muscle to stool continence
0%
10%
50%
90%
100%

contribution of internal sphincter ani (= anorectum) to stool continence
0%
10%
50%
90%
100%

perineal body contributes to stool continence mechanism
since it consists of connective tissue
since it contracts and then compresses the anorectum
stabilizes the vulva in its anatomic position and shape
stabilizes the anterior anus/anorectum in its anatomic position
stabilizes the posterior anus/anorectum in its anatomic position
repair of fresh sphincter ani rupture
simple so for anybody
needs little experience so for the young resident doctor
needs some experience so for the senior registrar
complicated surgery so only for the expert surgeon
colostomy necessary and as such recommended
just a couple of perineum sutures since perineal tear
concentrate on anorectum
concentrate on sphincter ani muscle
concentrate on perineal body
need for anterior levator ani muscle plasty
need for gracilis muscle graft

repair of old (or unsuccessful repair of) sphincter ani rupture
needs some experience so for senior registrar
complicated surgery so only for the expert surgeon
colostomy necessary and as such recommended
need for anterior levator ani muscle plasty
need for gracilis muscle graft

obstetric fistula surgery
simple so anybody can handle the obstetric fistula
needs some experience so anybody after 2-3 weeks of training
not so simple so doctor needs at least 3 yr of surgical experience
very complicated so for expert surgeons after intensive postgraduate training
questionnaire II
true/false statements
circle the right answer
read it carefully as some of the questions/answers are tricky

the obstetric fistula is caused by pressure necrosis due to prolonged obstructed labor true/false

during obstructed labor the soft tissues (vagina wall and bladder) are being compressed between the hard fetal skull and the hard posterior maternal symphysis true/false

the cause of obstetric fistula is early marriage/pregnancy true/false

the obstetric fistula will disappear if the minimum legal age for marriage of the woman is set at 18 yr true/false

examination under anesthesia as a separate procedure (EUA) is utterly nonsense and a money maker for the doctor true/false

lymphogranuloma venereum (LGV) is an infection affecting the vulva and can cause VVF true/false

it is possible for small fistulas to heal spontaneously before there is any cross-union between the bladder mucosa and the vagina mucosa true/false

early closure within the first 3 months gives worse results than closure after 3 months true/false

in small fistulas bladder drainage by indwelling FOLEY catheter will heal at least 50% of the patients and is highly recommended true/false

any urine leakage post partum is caused by a fistula true/false

minute fistulas are ideal for surgical trainees to start with true/false

if there is urine (ammonia) dermatitis of the vulva, it should not be treated but a repair performed as soon as possible true/false

fistulas with bladder prolapse are inoperable true/false

colostomy is the solution for RVF true/false

62
by the time the patient is fixed in the knee-elbow position the operation in the exaggerated lithotomy position is already finished true/false

in fistulas with circumferential defect the knee-elbow or knee-chest position is needed as the whole procedure becomes less complicated true/false

by performing only a colostomy the stool is diverted through to an abnormal opening in the abdomen (and occasionally still through the vagina) which is a tremendous relief to the RVF patient true/false

the grading of drop foot according to the Medical Research Center scale is partially objective by a subjective person true/false

on the MRC scale grade 4 means full range of movement but diminished muscle strength true/false

in fully developed postpartum atonic bladder the patient complains of only leaking whilst standing/walking but not whilst lying down true/false

in stress incontinence the bladder capacity is decreased true/false

yankan gishiri is responsible for 12% of all fistulas true/false

yankan gishiri is responsible for 12% of obstetric fistulas true/false

from the patient's point of view and socially the VVF is more embarrassing than the RVF true/false

grafting is better than or equal to reconstruction of functional anatomy true/false

the external sphincter ani is innervated by the pudendal nerve true/false

the internal sphincter ani is innervated by the pudendal nerve true/false

stress incontinence is always associated with intrinsic incontinence true/false

the sling operation is a physiologic solution for postrepair incontinence true/false

the pubococcygeus muscle sling is a physiologic solution for prevention of postrepair incontinence true/false
sexual violence whilst being in government custody

there is high political interest in sexual violence in war situations as violation of human rights

however, what about sexual violence whilst being in government custody

the report as released by us department of justice is quite shocking

**rape in US inmates 2008**  
report by us department of justice

217,000 inmates were raped whilst inside US jails and prisons during the year 2008; number of incidents not mentioned which is far higher since multiple rape per person 17,000 (12%) of juveniles were raped  
4.4% of prison inmates  
3.1% of jail inmates

600 persons are raped a day; considering multiple rape actual number far higher  
25 persons raped an hour; considering multiple rape actual number far higher

more rapes by staff than by other inmates; though sex between guards and inmates is illegal

law since 2003 but not enforced

question: incidence of sexual violence related injuries in USA

source: the economist 2011, may 7-13, vol 399, no 8732, p 46-47
documentation + fistula research 1984-2011

documentation
the strength of the project is the complete systematic meticulous documentation by over 21,500 individual computerized comprehensive reports of history, findings, operation procedures and evidence-based results of each patient (from the very first to the last in a consecutive way) combined with prospective studies; as well the findings are documented by schematic drawings and some 150,000 full-color slides and full-color digital photos and the different operation techniques by some 80-100 hours of full-color analogous/digital videotapes; from each report we make 2 hard copies

evidence-based results
the patient gets her own card in a plastic map with date and operation report which she presents any time she comes for follow-up; at any postoperative follow-up, normally 5x from 2 wk up to 6 mth but even years later, the findings are written down on the hard copy and later entered into the computerized report which contains up to 250 different parameters from time to time an analysis is made of the evidence-based results to draw sensible conclusions about the operation techniques and the project as a whole the documentation is time consuming and takes stamina but without documentation there is no feedback and no proof

research
this is a continuous process, first in a retrospective way but from 1988 onwards, only in a prospective way about the obstetric trauma in its broadest sense

only by clinical research we came far and found scientific, theoretic and practical solutions for each and every problem encountered

it resulted in a long list; the most important are

PhD degree at University of Utrecht in 1989 about the obstetric fistula

scientific classification of VVF with consequences for operation technique and evidence-based prospective outcome as to closure and continence

scientific classification of RVF with consequences for operation technique

secondary prevention by the immediate management

prevention of postrepair incontinence by meticulous repair of the pubocervical fascia

logical physiologic approach to genuine and postrepair total urine incontinence where reconstruction of the functional anatomy restores normal physiology: continence

physiologic operation technique for sphincter ani rupture

mini-invasive uterus-saving operation for total 3° cervix prolapse

the philosophy of minimum approach proved highly efficient and successful
the already impressive documentation is being updated by adding an electronic schematic drawing of the fistula to the electronic operation report

the operation report is enclosed with the patient’s papers inside a plastic file; so any time she presents herself to any health center; the health personnel can see exactly what has been done and take appropriate action; all the health documents belong to the patient

the classification of vvf and rvf is hard to beat since they are based on qualitative and quantitative necrotic tissue loss of pelvis floor structures with evidence-based consequences for the operation technique and results as to closure and continence

the longer we use these scientific classifications the more they become of value

the immediate management by catheter and/or early closure is proven beyond any doubt over 20 years in 4,500 patients . . . . . preventing them from becoming outcasts

how can one deny a patient treatment for 3 full months by sending her away from the health facility; is that the holistic approach as preached by everybody or is it just what it is: medical malpractice

the operation techniques have all been perfected as based on the principles of reconstructive surgery and evidence-based results; also the principles of septic surgery proved to be of high value

only a failed system of obstetric care at secondary health level is responsible for the obstetric fistula as a public health problem

any grafting is a non-physiologic procedure and as such inferior to techniques as based on reconstructive surgery restoring the functional anatomy

once the functional anatomy has been restored, under physiologic stress the normal physiology will be promoted as well

the only function of a suture is to bring and keep tissues together for a sufficiently long time so that nature can execute its physiologic healing processes

the author is privileged to study the experiments of nature about the urine continence mechanism in the female as presented by the obstetric fistula

our findings of anatomic tissue loss, our physiologic operation techniques to step-by-step reconstruct the functional anatomy, our evidence-based results and our theory are in sharp contrast with the current theory about the urine continence mechanism in the female

the main continence mechanism is situated within the urethra whilst the potential can shift from the urethrovesical junction towards the external urethra opening as based on physiologic stress; therefore in 3° cervix prolapse normally the woman is continent even with a urethra length of 0.5-1 cm as the distal urethra narrows to pin point size; normally there is no kinking and no masked incontinence
genuine intrinsic/stress incontinence

this theory is based on almost 30 years of clinical research of the complex obstetric trauma and its (surgical) management

the evidence comes from meticulous systematic description in writing of the history, anatomic defects, step-by-step operation reports with drawings, long-term follow-up and evaluations of theory and results

any stress incontinence is an expression of a defective intrinsic mechanism (urethra) varying from minimal to total; therefore, intrinsic/stress incontinence

intrinsic/stress incontinence is caused by traction/pull onto the posterior urethra wall into the vagina towards the cervix/vault/sacrum; since the anterior urethra is fixed onto the symphysis the (muscular) arrangement of the urethra is distorted due to this pull, no longer “circular” but more “oval” and so physiologic closure of the urethra is counter-acted

incontinence mechanism
the urethra tries to close whilst traction onto the posterior urethra wall pulls it open
whichever force is the stronger will prevail

this mechanism had been demonstrated and documented in numerous operations involving the continence mechanism where this posterior pull was neutralized by reconstructive longitudinal and/or transverse repair of the pubocervical fascia and its attachment to the arcus tendineus fasciae paraurethrally; since an intact pubocervical fascia stabilizes/secures the urethra in its anatomic position

there are many underlying causes for traction/pull onto the posterior urethra wall and the art & science is first to define the cause and then reconstruct the functional anatomy in order to neutralize this traction/pull

this mechanism explains why there may be intrinsic/stress incontinence e.g. with longitudinal anterior vagina wall scarring, with fixed cervix and with ureter fistula

so any trick without understanding the underlying pathophysiology is inferior to physiologic techniques which reconstruct the functional anatomy

besides this, how can artificial allograftic materials replace the autologous soft anatomic tissues of the continence mechanism; if it were not for the industry and the money attached; so it is difficult to fight

the principles and physiologic operation techniques as developed in this project have proven to be highly effective in step-by-step reconstruction of any defect in the functional anatomy of the continence mechanism with step-by-step intraoperative prediction/check and prospective prediction of also long-term results

once the functional anatomy has been reconstructed the physiology will be promoted/restored under physiologic stress
Pt 7

KATSINA

female 16 yr 27/03-84

surgeon: Kees WAALDIJK

assistant: Dr RAO

diagnosis: PI, + 3x2 cm urethrov esicovaginal fistula midline/L type IIAb, leaking of urine for 2 yr which started immediately following obstructed labor for 2 days, SB male, married 3 yr ago, not living with husband; pww stricture EUO/F 4 cm

operation: UVVF-repair and bulbocavernosus fat plasty R
duration: 60 min

anesthesia: spinal L3/L4 with 2 ml lignocaine 5%

incision at 0.2 cm from fistula edge, sharp/blunt dissection of avw, FOLEY Ch 16, tension-free transverse bladder/urethra closure by double layer of inverting chromic catgut, first continuous and second interrupted, check by gv, incision R labium majus, sharp dissection/mobilization of bulbocavernosus fat, tunneling under R lateral vagina wall, fixation of this fat over repair, transverse avw closure, skin closure, pressure pad and vagina pack; free urine flow

15.04 +19.09.84 not leaking at all, no incontinence, normal miction insp/ healed

new second obstetric fistula PII (0 alive) sb female in hospital

01/07-88 operation: UVVF-repair Pt 853 VVF 960

16/11-88 not leaking at all, no incontinence, normal miction insp/ healed, no stress incontinence

new third obstetric fistula PIII (1 alive) live female in hospital

02/09-93 operation: cystostomy_stone_VVF-repair Pt 1978 VVF 2418

28/05-94 not leaking at all, no incontinence, normal miction insp/ healed, good elevation, no stress incontinence

RR
preanesthesia: 135/85 mm Hg
5": 135/85
10": 130/80
15": 130/80
postoperation: 125/80

3x2 cm
Pt 92

**KATSINA**

fixation of fibrofatty pad graft onto pubic bones in order to elevate bladder neck

h m d (rép niger) female 17 yr 28/02-85

surgeon: Kees WAALDIJK

assistant: Dr RAO

**diagnosis:** PI, + 7x5 cm urethrovesicovaginal fistula type IIbA, leaking urine of 3.5 yr which started immediately following obstructed labor for 7 days, dead male, married 7 yr ago, not living with husband, 1x operation 2 yr ago EUO/F 0 cm, F/C 3 cm

**operation:** UVVF-repair, urethra reconstruction and fibrofatty pad graft R

**duration:** 120 min

**anesthesia:** spinal L3/L4 with 2 ml lignocaine 5%

ureters not identified, wide U incision at ± 2 mm from fistula edge and 10 mm from urethra roof, difficult sharp/blunt dissection due to scar tissue+, FOLEY Ch 16, tension-free longitudinal urethra reconstruction by double layer and transverse bladder closure by single layer of inverting chromic cat gut, gv check, an incision R labium majus, sharp dissection/mobilization of bulbocavernosus fibrofatty tissue, tunneling under R lateral vagina wall, transverse fixation of the fibrofatty pad over repair taking care that it is spread tightly from R pubic bone periost to L pubic bone periost to elevate bladder neck, transverse avw closure by chromic catgut, skin closure, pressure pad, vagina pack; free urine flow

16.03.85 not leaking, no incontinence, normal miction insp/ healed

04.10.85 urine retention 2x foley ch 18

09.12.85 not leaking, incontinence + insp/ dilatation of UV-stricture

06.01 + 10.06.86 not leaking, no incontinence insp/ healed, neo-euo ok

03/10-89 amenorrhea for 4 mth not leaking at all

RR

preanesthesia: 150/90 mm Hg

5": 150/90

10": 150/90

15": 140/90

postoperation: 135/90
Pt 376  

**KATSINA**  

pubococcygeus muscle plasty  

VVF 411

s a k (katsina)  

female  

30 yr  

30/06-86

surgeon:  

Kees WAALDIJK

assistant:  

Mammani ADAMU

diagnosis:  

PVII (2 alive), + 0.5 cm 0 urethrovesicovaginal fistula midline type IIa, leaking urine for 4 mth which started immediately following obstructed last labr for 1 day, SB male, married 15 yr ago, not living with husband, cystocele ++  

EUO/F 4 cm, F/C 7 cm

operation:  

UVVF-repair and elevation by pubococcygeus plasty

duration:  

40 min

anesthesia:  

spinal L3/L4 with 4 ml bupivacaine 0.5%

incision at fistula edge with bilateral transverse extensions, sharp/blunt dissection of avw, FOLEY Ch 16, tension-free transverse closure by single layer of inverting chromic catgut 00, gv check, no ff graft but since cystocele ++ elevation by uniting pubococcygeus muscles underneath by chromic catgut 1/5, transverse avw closure by chromic catgut 1/5, vagina pack; free urine flow

15.07 + 28.07 + 11.11.86 not leaking, no incontinence, normal miction insp/ healed

14/01-87 not leaking at all, no incontinence, normal miction insp/ healed, no stress incontinence, no cystocele

01/08-88 delivered live female **at home** not leaking at all

RR  

preanesthesia: 140/90 mm Hg

5": 130/80

10": 130/80

postoperation: 120/70
Pt 492  
KATSINA  
obstetric total urine incontinence; pcm plasty  
VVF 542  

h s b (katsina)  
female  
20 yr  
09/02-87  

surgeon:  kees waaldijk  
assistant:  dahiru halliru  

diagnosis:  PI, total urine incontinence grade III, leaking urine whilst lying/sitting/standing/walking for 2 yr which started immediately following obstructed labor of 2 days, live male, married 4 yr ago, not living with husband, cystocele  

operation:  plication of paraurethra muscles/bladder neck rhaphy/elevation by pcm  
duration:  75 min  
anesthesia:  spinal L3/L4 with 4 ml bupivacaine 0.5%  

transverse curved incision, sharp dissection of avw, sharp dissection of bladder from lateral sides, bilateral longitudinal incision at paraurethra muscles up to symphysis, FOLEY Ch 16, plication of paraurethra muscles over urethra with rhaphy of bladder neck by interrupted chromic catgut 00, preparing 1 cm broad strips from both pubococcygeus muscles, high elevation of bladder neck by suturing these strips over it far anterosuperiorly onto opposite pubic bones and uniting them medially, no dye thru euo on cough, transverse avw closure by everting chromic catgut 0/4, vagina pack; free urine flow, no cystocele  

03.03 + 17.03.87  not leaking, no incontinence, normal miction  
insp/ no stress  

23/04-87  not leaking at all, no incontinence, normal miction  
insp/ healed, good elevation, no stress incontinence, no cystocele  

13/07-88  amenorrhea for 7 mth  not leaking at all  

RR  
preanesthesia:  120/70 mm Hg  
5":  110/70  
10":  110/70  
postoperation:  110/70
Pt 4019  
KATSINA  
second obstetric fistula  
VVF 5264

I s m (katsina)  
female  
19 yr  
10/10-01

surgeon:  
Kees WAALDIJK

assistant:  
Halima MANIR

diagnosis:  
PIII (1 alive), large + 1 cm 0 urethrovaginal fistula IIa midline fixed to symphysis, leaking urine of 4 mth that started immediately following obstructed last labor for 1 day, at home live male, married 6 yr ago pre(menarche 4 mth later), not with husband, no menstruation, drop foot R (grade 4), no RVF, yankan gishiri no; normal AP diameter/pubic arch 85E, N.B. successful VVF-repair (B/R Id) after delivery II EUO/F 4 cm, F/C 0 cm 153.0 cm

operation:  
UVVF-repair

duration:  
30 min

anesthesia:  
spinal L4/L5 with 4 ml bupivacaine 0.5%

episiotomy L, transverse incision thru fistula, sharp dissection, tension-free transverse bladder/symphysis/urethra closure by single layer of inverting serafit, FOLEY Ch 18, transverse avw/cervix adaptation by 3x evertting seralon, skin closure, pack; free urine flow, EUO/BW 13 cm, good elevation, EUO/B 4 cm normal bladder capacity (longitudinal diameter 13-4 = 9 cm) good position of UV-junction against middle third of symphysis

20/11-01  
not leaking, incontinence +, normal miction

17/04-02  
not leaking at all, no incontinence, normal miction

new third obstetric fistula  
PIV (0 alive) after home delivery of 2 days

16/05-03  
operation:  
UVVF-repair

Pt 4178  
VVF 5772

10/12-03  
not leaking at all, no incontinence, normal miction

new fourth obstetric fistula  
PV (1 alive) at home for 2 days SB male

06/08-04  
2 cm 0 necrotic UVVF

cath 851

20/10-04  
not leaking at, no incontinence, normal miction

RR

preanesthesia:  
150/80 mm Hg

5":  130/70

10":  120/70

postoperation:  
100/70

1 cm 0
Pt 5089                      KATSINA                  VVF 6565
urethra_EUO open by pull onto proximal posterior urethra repair/fixation of ep_pc fascia neutralizes pull

b t d-d (kaduna)  female    15 yr    01/10-05

surgeon: kees waaldijk
assistant: kabir lawal

diagnosis: PI, + 1 cm 0 urethrovesicovaginal fistula IIa midline, leaking urine for 49 days that started immediately following obstructed labor of 3 days in hospital, SB male, married 2 yr ago pre(menarche 2 mth later), not living with husband no menstruation, drop foot R (grade 4) and L (grade 5), no RVF, no yan kan gishiri; normal AP diameter/pubic arch 85°, AR pos, sutured 1x EUO/F 2 cm, F/C 3 cm open urethra_EUO 146.0 cm

operation: UVVF-repair
duration: 20 min (full video recording) closure 95% continence 90%
anesthesia: spinal L4/L5 with 4 ml bupivacaine 0.5%

episiotomy L, transverse incision thru fistula edge, sharp dissection, tension-free transverse bladder/symphysis/urethra closure by single layer of inverting serafit, separate bilateral paraurethral fixation of ep-pc fascia, triple fixation of FOLEY Ch 18, transverse skin awv/avw adaptation by 2x everting seralon, skin closure, pack; free urine flow, EUO/BW 14 cm, good anterior elevation, EUO/B 2 cm (loss) normal bladder capacity (longitudinal diameter 14-2 = 12 cm) urethra_euo adapted acceptable position of UV-junction against middle/caudad third of symphysis

02/01-06 not leaking at all, no incontinence, normal miction insp/ healed, good elevation, no stress incontinence

15.10.06 amenorrhea for 3 mth not leaking at all

RR
preanesthesia: 120/70 mm Hg
5': 120/70
10': 110/70
postoperation: 100/70
Pt 5280  
KATSINA  
VVF 6779

latest development with correction of the anatomic defects _ prospective 
this will work according to science_art

n m u b (rép niger)  
female  
16 yr  
11/06-06

surgeon:  
kees waaldijk

assistant:  
kabir lawal

diagnosis:  
PI (0 alive), post IIAb total urine intrinsic stress incontinence III, leaking urine whilst lying/sitting/standing/walking (no spontaneous miction) for 2 yr which started immediately following obstructed labor for 2 days, in hospital may SB male, married 3 yr ago pre(menarche 2 mth later), not living with husband, normal menstruation, bilateral drop foot for 2 mth R (grade 5) and L (grade 5), no RVF, no yankan gishiri; ?AP diameter?/pubic arch 85°, AR pos, major pc__ic__ic muscle loss, severe vagina stenosis/shortening, major defect R fascia, L "ok", operated 2x (zinder) euo/c 2.5 cm wide open 1.5 urethra_euo 156.0 cm EUO/BW 14 cm, good elevation, EUO/B 1.5 cm (circum loss)

operation:  
urethralization, EUO fixation and paraurethra fixation of ep_pc fascia
duration:  
#20 min urethra will start functioning final continence 90%
anesthesia:  
spinal L4/L5 with 3 ml bupivacaine 0.5%

re-episiotomy L, without any incision sub-avw rhaphy of fascia_urethra_EUO at 0-2 cm from EUO by single layer of interrupted serafit, bilateral anterior fixation of EUO by serafit, now EUO/B 2.5 cm, no urine thru EUO on rest/cough/ pressure, small transverse incision R over fascia defect, paraurethra fixation of „fascia”_avw_cervix by 1x seralon, now EUO/B 3.5 cm, triple fixation of FOLEY Ch 18, pack; free urine flow, EUO/BW 14 cm, good anterior elevation (urethra fixed onto symphysis), EUO/B 3.5 cm (compression)

severe scarring length_diameter_support_position ok

normal bladder capacity (longitudinal diameter 14-1.5/2.5/3.5 = 12.5/11.5/10.5 cm) good fixation of UV-junction against middle third of symphysis no pcm normal-width 3.5 cm urethra_EUO in this patient poor pcm will not prevent urethra from functioning since other factors have been corrected

17/07-06 not leaking, incontinence +, normal miction bladder drill

insp/ healed, good elevation, stress incontinence +

14/08-06 not leaking, incontinence +, normal miction R=5 L=5

insp/ healed, good elevation, no stress incontinence AR pos

RR

preanesthesia:  
130/90 mm Hg
5’:  
130/80
10’:  
130/80
postoperation:  
120/70
Pt 5856 KATSINA VVF 7486

k d r (katsina) female 13 yr 09.10.08

surgeon: kees waaldijk
assistant: kabir lawal

diagnosis: P0, extensive ± 6x4 cm urethrovaginoscavagal fistula type IIb with bladder base prolapse, leaking urine for 3 mth which started immediately following yankan gishiri by wanzami bco not sleeping with husband (she does not like him), native medicine, married 1 yr ago pre(menarche 7 mth later), not living with husband, normal menstruation, drop foot R (grade 5) and L (grade 5), no RVF; normal AP diameter/pubic arch 85°, AR pos

lying/2 more persons/aska/tissue removed (-ectomy)
EUO/F 0 cm, F/C 1.5 cm, i/v 10 cm 157.0 cm

operation: continent urethra/fascia/avw reconstruction

duration: 25 min

healing 95% continence 95%

anesthesia: spinal L4/L5 with 3 ml bupivacaine 0.5%

bilateral episiotomy, both ureters identified but only R catheterized for 20 cm, L one minute os which cannot be catheterized (no scarred stenosis that is why it is left), creation of 2.3 cm neourethra thru anterior bladder using metal dilatators, incision around fistula, sharp dissection, tension-free transverse bladder to symphysis/neourethra closure by single layer of inverting serafit with complete repair of pcf sothat there is proper support for neourethra (but no covering over distal urethra neourethra), triple fixation of FOLEY Ch 18, transverse avw adaptation but again no covering of distal neourethra, check on hemostasis; free urine flow, EUO/BW 12 cm, good anterior elevation, EUO/B 2.3 cm

normal bladder capacity (longitudinal diameter 12-2.3 = 9.5 cm)
good position UV-junction against middle third symphysis

normal-width 2.5 cm good-quality bladder neourethra_EUO slightly drawn inside

cave obliteration of neourethra

17.12 + 15.12.08 not leaking, incontinence ±, normal miction insp/ healed, no stress

26.04.09 not leaking at all, no incontinence, normal miction

Insp/ healed, good elevation, no stress incontinence

16.05.11 amenorrhea for 3 mth not leaking at all

RR

preanesthesia: 120/70 mm Hg
5': 110/70
10': 110/70
postoperation: 110/70
prevention

only by building hospitals, roads and schools
lesson learned from history

in the USA 480,000 teenage deliveries during the year 2002
however, not a single obstetric fistula

does it make sense to mobilize the community to send a patient to a non-functioning hospital

is the community or religious leader coming out of his bed to perform an emergency cesarean section

is it not time to change the strategy

after 30 years of failed safe motherhood campaigning

which did not bring a single positive result
due to the arrogance of the aid organizations
spending a fortune
on things which make no sense

at the moment it does not make a difference
where a woman delivers
she is being neglected all the same
at home and in the hospital
dead infant and dead or mutilated mother

there is no relation to

early marriage, height, religion, tribe, race, rural area etc

only to

poor obstetric care
in Laure fistula center 70% of the patients are coming from within Kano metropolis; 30% have even delivered in the same hospital.

In the southern parts of Nigeria many patients deliver in the church and get their fistula inside the church.

does it make sense to keep partograms if there is no follow-up due to a non-functioning hospital?

Will legislation to elevate the age of marriage eliminate the obstetric fistula as people want us to believe?

Will legislation to elevate age of marriage eliminate early sex/early pregnancy or early childbearing; or does this increase the risk of unsafe abortions?

Since obstetrics is 100% female from the beginning to the very end (except a male obstetrician performing a cesarean section)
does it make sense to address the males?
is it not better to address the females themselves?

more than 90% of the financial resources are spent on the organization and expensive talkshops

not up to 10% spent on patient care or prevention

however, where is the international strategy to set up

network of 125,000 functioning obstetric units in Africa

improve the hospital obstetric care so that the highly intelligent public notices the difference live infant and healthy mother themselves
sacrotuberal + sacrospinous ligament
workshops

there are several general and/or specific objectives: to operate a large number of patients within a short time, to demonstrate the state of the art operation techniques, to give high-quality lectures, to tackle a specific problem (stress incontinence, urinary diversion), to promote spinal anesthesia, to initiate doctors with low experience, to further train doctors with experience on an advanced level, to train nurses at all levels, to start a vvf service in a certain area and for advocacy and publicity.

duration
from a minimum of 2-3 days to start a vvf service up to 2 weeks if large numbers of patients are available and reliable postoperative care can be secured.

minimum number of patients
for a 1-week workshop 25-30 patients and for a 2-week workshop 40-50 patients, otherwise there is no cost-benefit effect.

venue
any hospital which can handle the (large) number of patients to be operated within a short time: operation theater, autoclave, pre-/postoperative beds and trained personnel.

equipment
if one/two fistula surgeon-trainer: one/two fistula operating table(s) with one/two full set(s) of instruments.

pre-workshop screening
the (fistula) doctor of the hospital together with his staff is responsible to collect and screen the patients already far in advance. the logistic officer has to make all the necessary arrangements for accommodation, feeding and transport etc.

facilitators
one or two experienced fistula surgeon-trainers, one or two experienced fistula operation theater nurses, one or two experienced spinal anesthesia nurses or doctors and two experienced pre-/postoperative nurses and one logistic officer.

trainees
per trainer 3-4-5 doctors together with their operation theater nurse, their anesthetic nurse and their pre-/postoperative nurse. however, if the workshop is meant to start a vvf-service more doctors and especially more nurses and midwives should attend.

workshop day-by-day
first day: opening, introduction, questionnaire by trainees for self evaluation and then history taking and examination of the patients, operation time-plan for each day from second day onwards: wardround, operations with step-by-step demonstration of state of the art techniques, simple operations by the trainees under close supervision, pre-, intra- and postoperative questions and answers, lecture(s) and wardround last day: ward round, evaluation by all participants, handing out certificates, closure.

postworkshop follow-up
the fistula doctor of the hospital and his staff are responsible for the further postoperative care and follow-up of the patients.
**philosophy**
since the emphasis should be placed upon the quality and not the quantity it is better
to execute small 4- to 5-day well organized workshops with small numbers of patients
than large 10- to 14-day workshops with large numbers of patients where the organi-
zation on ground and good postoperative care being the weakest part cannot be
ensured

**optimal workshop**
identify an area where the obstetric fistula is highly prevalent, select an obstetric
fistula team, send them for training, this team selects and screens patients and then
makes sure the conditions are ok, then invite real fistula surgeon(s) + team
the real expert fistula surgeon(s) + team in combination with the obstetric fistula team
on ground screens all the patients for a final selection and sets the objectives
opening ceremony and handing out of a questionnaire for self-evaluation
starts operating whilst demonstrating the step-by-step technique followed by
questions & answers about the procedure and theoretical lectures
during the year the chief consultant + team (co) facilitated the following 10 workshops

**may 2011 workshop in sokoto and kebbi:** 21 procedures

**june 2011 training workshop I in katsina:** 88 procedures

**june/july 2011 training workshop II in kano:** 76 procedures

**july 2011 training workshop III in katsina** 84 procedures

**september 2011 training workshop IV in kano** 55 procedures

**september 2011 workshop in zinder** 16 procedures

**october 2011 workshop in maradi** 28 procedures

**october 2011 training workshop V in katsina** 81 procedures

**november 2011 workshop in maryam abacha hospital in sokoto:** 21 procedures

**november 2011 workshop in federal medical center in nguru:** 18 procedures

**total** 488 procedures
we decided to combine this trip to sokoto with a visit to the special vvf center in birnin kebbi both on request by the staff of the centers

these hospitals are very important centers with an enormous potential which has so far been under-utilized though we have been coming and operating and training doctors here since 1994 resp 1997

a total of 21 procedures were performed in 20 patients

when we left there were still many patients left on the long waiting list in these two fistularia; the longer patients stay the more difficult it becomes to rehabilitate them into taking responsibility for their own lives instead of depending upon others
vvf hosp Maryam Abacha Hospital
sokoto

special vvf center
birnin kebbi

day-to-day report
23rd thru 28th of may 2011

Monday 23rd of may 2011
we left katsina at around 11.00 hr and after some 450 km by toyota jeep we arrived safely in sokoto at around 16.30 hr where we checked into the hotel; we had to make several full stops to avoid head-on collision with on-coming cars on the wrong side of the road

tuesday 24th of may 2011
we proceeded to maryam abacha women and children hospital in sokoto, the venue of the activities, at around 8.00 hr and started to work

six procedures: compression/ligation of traumatized L uterine artery in ragged type I cs fistula in para IV (2 alive), circumferential end-to-end uvvf-repair of type II Bb fistula in para I (0 alive), transverse uvvf-repair + pcf fixation of type II Aa fistula in para I (0 alive), anorectum/sphincter ani reconstruction of type II Bb rectovaginal fistula in para I (alive) with catheter treatment bco intrinsic total urine incontinence, catheter treatment of type II Aa fistula leaking 24 days and wardround from 8.00 to 16.30 hr

Wednesday 25th of may 2011
five procedures: continent urethra/fascia/avw reconstruction in severely mutilated type II Bb fistula in para I (0 alive) operated 2x (now actually “inoperable”), transverse repair and pcf fixation of strange type II Ab fistula in para VIII (4 alive) operated 1x, transverse repair + L ureter of severely mutilated type II Aa fistula following tah bco total cervix prolapse in para II (all alive), longitudinal pvw closure + complicated primary suturing of type I ssth-cs fistula in para IV (3 alive), catheter treatment of type II Aa fistula in para III (2 alive) leaking 13 days and wardround from 8.00 to 16.30 hr

Thursday 26th of may 2011
five procedures: transverse repair + pcf (re)fixation of mutilated type II Ab fistula in para IV (w2 alive) leaking 12 yr and operated 1x, continent urethra/avw reconstruction as salvage operation of severely mutilated type II Bb fistula in para I (0 alive) operated 1x, primary suturing as salvage of severely mutilated ragged type II Bb fistula in para I (0 alive) operated 2x, complicated repair of mutilated scarred type II Aa fistula in para IX (4 alive) operated 1x, transverse repair + pcf fixation of strange mutilated type II Aa fistula in para VII (3 alive) and wardround from 8.00 to 16.30 hr

and on the road to birnin kebbi 160 km where we arrived around 18.30 just in time
**Friday 27th of May 2011**

We proceeded to the special VVF center, the venue of the activities, at around 8.00 hr and started to work.

**Five procedures:** Transverse repair + PCF repair of type II Aa fistula in para I (0 alive), longitudinal intracervical VCVF-repair of type I fistula in para VI (2 alive) leaking 20 yr, bilateral ureter catheterization + circumferential repair + PCF refixation of type II Ab fistula in para II (1 alive), transverse repair of type II Aa fistula in para X (7 alive) and transverse repair + PCF fixation of type II Aa fistula in para II (1 alive) and wardround from 8.00 to 16.30 hr.

And on the road back to Sokoto 160 km where we arrived 19.30 hr a bit too late.

**Saturday 28th of May 2011**

8.00 hr up to the maishai and then traveling same dangerous 450 km back to Katsina where we arrived safely at around 15.00 hr mun gode Allah.

**Remarks**

We will continue to come to these centers since there are many patients waiting for us and the centers are too important to give up.

**Time Spent**

A total of 34 hours on the workshop and 18 hours on travelling during 6 full days.

**Conclusion**

It was a fine workshop where 18 operations and 3 catheter treatments were performed in 20 patients. However, have the benefits been worth the risk of traveling on dangerous roads, the costs, the efforts and the time spent for the time being we think so.

Kees Waaldijk, MD PhD
Chief Consultant Fistula Surgeon

30th of May 2011

Many thanks to the sponsors:
- Waha-International
- Sokoto State Government
- All the staff of the Maryam Abacha Hospital and the Special VVF Center Birnin Kebbi for their continuing support.
obstetric fistula surgery training

Babbar Ruga National Fistula Teaching Hospital
Katsina

first session as pilot

training of 4 consultants and 4 nurses
from monday 30.05 thru saturday 11.06

executive summary

the trainees arrived monday 30.05.11 and were handed a cd-rom with 5 books about the obstetric fistula for self-study

the program was run from tuesday 31.05 thru saturday 11.06 for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the 8 participants were able to practice

a total of 4 consultants/doctors and 4 nurses followed the intensive introductory training course

out of the total of 88 operations performed the 4 trainee doctors performed 9 under strict supervision with good result; more was not possible since the difficulty grading increased during the course

a total of 12 clinical and 15 classroom lectures were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the trainees travelled home on sunday 12.06.11

the whole training was executed according to the guidelines of international global competency-based training manual
first session as pilot
training of 4 consultants and 4 nurses
from monday 30.05 thru saturday 11.06

logbook

sunday 29.05
14.00 to 17.00 discussion with trainers about how to process

monday 30.05
07.00 preparation of facilities
14.00 arrival of trainees, again discussion with trainers, extensive discussions with staff of FMOH
selection of patients for the training workshop
20.00 further discussions with FMOH staff

day 1
tuesday 31.05
06.30 preparation of the hospital
10.00 small opening ceremony, introduction of participants, explaining the training to all participants and tour of the center
12.00 surgery with step-by-step teaching
   1 state-of-the-art lecture and demonstration of reconstructive surgery in surgery sphincter ani rupture with preoperative theoretic explanation, explanation and demonstration of spinal anesthesia, step-by-step reconstruction of internal sphincter (anorectum), end-to-end reconstruction of sphincter ani and repair of perineal body with (in)direct re-union of transversus perinei and posterior re-union of bulbocavernosus muscles in para VI (5 alive)
   2 state-of-the-art lecture and demonstration of fixation of cervix onto L superior pubic bone ramus/arcus tendineus fascia/obturator internus muscle against levator ani muscle as mini-invasive uterus-sparing procedure for total 3° cervix prolapse in para II (all alive)
15.00 four lectures
   a sphincter ani rupture; a complex trauma
   b total 3° cervix prolapse
   c the obstetric fistula in its broadest sense
   d questions & answers about procedures and lectures
17.30 wardround of postoperative patients
19.00 end of the working day

day 2
wednesday 01.06.11
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation
day 3  
**Thursday 02.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 4  
**Friday 03.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 5  
**Saturday 04.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 6  
**Sunday 05.06**  
07.00 preparations for the day  
08.00 recap of previous day  
09.00 surgery with step-by-step teaching  
32 *state-of-the-art* lecture and *step-by-step* demonstration of reconstructive surgery for sphincter ani rupture already operated 2x  
33 repair of type I fistula by trainee doctor under direct supervision/assistance by chief surgeon in para VIII (5 alive)  
34 repair and fascia repair/bilateral fixation of residual type IIAb lungu fistula in para I (0 alive)  
35 urethralization by bilateral fascia fixation in total post IIAb intrinsic stress incontinence grade III in para I (0 alive)  
36 assessment of type I cs-vcvf in para VIII (4 alive) with severe obesity and fistula high up in vagina; first to slim down  
37 bilateral fascia fixation in total post IIAb intrinsic stress incontinence in para I (0 alive)  
38 repair + bilateral fascia fixation in large type IIAb fistula in para VI (2 alive)  
39 uvvf-repair + transverse fascia repair of type IIAb fistula in para VII (0 alive) leaking 17 yr since delivery I and operated 1x elsewhere  
16.30 no lectures since it is sunday  
16.30 wardround  
16.30 closure by participants  
18.00 selection of patients for next day  
18.00 closure of the day

day 7  
**Monday 06.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 8  
**Tuesday 07.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 9  
**Wednesday 08.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation

day 10  
**Thursday 09.06**  
preparations, recap, surgery, lectures, q&a, wardround, selection, documentation
day 11
friday 10.06
preparations, recap, surgery, lectures, q&a, wardround, prepartions, documentation

day 12
saturday 11.06
07.00 preparations for the day
08.00 recap by ms binta garba
08.30 wardround
09.00 surgery with step-by-step teaching

83 state-of the-art demonstration of advancement/circumferential fixation of bladder into euo in extensive type IIb fistula as first stage in ba hanya in para I (0 alive)
84 bilateral fixation of pc fascia onto para-euo atf as last resort final procedure in post IIb total intrinsic stress incontinence after vvf/rvf-repair in para II (0 alive)
85 uvvf-repair + euo-rhaphy in type IIa fistula in para VI (1 alive) after operation elsewhere
86 vvf-repair of type I fistula caused by caustics for reasons unknown in para XI (4 alive)
13.00 evaluation of the training programme by trainees and trainers
small closing ceremony
handing out certificates to participants
farewell wishes
15.30 participants left hospital
17.00 wardround
18.00 selection of patients
19.00 end of working day

day 13
sunday 12.06
participants travelled home and routine returned
surgery
87 ps-like 4/5 circumferential uvvf-repair as minimum surgery of new second obstetric extensive type IIb fistula in para VII (1 alive) who had a successful repair post delivery III (0 alive)
88 complicated ps-like uvvf-repair as last resort final of extensive type IIAb fistula in para I (0 alive) operated 3x elsewhere and leaking for 25 yr with extensive anteriobilateral trauma and long-standing non-drink ing
14.00 chief sugeon travelled to kano for surgery and for organizing the second session starting monday 27th of June 2011
17.15 arrival at hotel and end of working day

kees waaldijk MD PhD
chief consultant surgeon

21st of June 2011
### participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Facility</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>dr idris ahmad</td>
<td>chief medical officer</td>
<td>fmc</td>
<td>keffi</td>
</tr>
<tr>
<td>mrs rosemary obiorah</td>
<td>acno</td>
<td>fmc</td>
<td>keffi</td>
</tr>
<tr>
<td>dr sadiya nasir</td>
<td>consultant obs&amp;gyn</td>
<td>uduth</td>
<td>sokoto</td>
</tr>
<tr>
<td>mrs lami s a osori</td>
<td>acno</td>
<td>uduth</td>
<td>sokoto</td>
</tr>
<tr>
<td>dr nasir garba abdullahi</td>
<td>consultant obs&amp;gyn</td>
<td>fmc</td>
<td>azare</td>
</tr>
<tr>
<td>ms binta adamu garba</td>
<td>sno</td>
<td>fmc</td>
<td>azare</td>
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<tr>
<td>dr sunday eneme adaji</td>
<td>consultant obs&amp;gyn</td>
<td>acno</td>
<td>abuth</td>
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<tr>
<td>mrs lami s okoye</td>
<td>acno</td>
<td>abuth</td>
<td>zaria</td>
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### trainers

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<th>Name</th>
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</thead>
<tbody>
<tr>
<td>dr said ahmad</td>
<td>consultant obs&amp;gyn</td>
<td>jahun vvf center</td>
<td></td>
</tr>
<tr>
<td>dr idris a halliru</td>
<td>moh</td>
<td>katsina</td>
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### facilitators pre-, intra- and post-operative care

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>dr abdulmajid mudasiru</td>
<td>cmd</td>
<td>babbar ruga hospital</td>
</tr>
<tr>
<td>alh abdullahi haruna</td>
<td>cno</td>
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<tr>
<td>alh kabir k lawal</td>
<td>cno</td>
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<td>alh gambo lawal</td>
<td>cno</td>
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<tr>
<td>hajiya adetutu ajagun</td>
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### chief trainer

<table>
<thead>
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<th>Name</th>
<th>Position</th>
<th>Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>dr kees waaldijk</td>
<td>chief consultant surgeon</td>
<td>babbar ruga hospital</td>
</tr>
</tbody>
</table>
obstetric fistula surgery training

second session

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

training of 4 consultants and 5 nurses

from monday 27.06 thru sunday 10.07.11

executive summary

the trainees arrived monday 27.06.11 and were handed a cd-rom with 5 books about
the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire
for active participation, self-study and self-evaluation

however, none of the doctors was a consultant which made the training even more
difficult since the basics in theory and practice are not present though they had a
variable experience in obstetrics/gynecology

all the participants insisted that we should stick to the normal working hours and
some complained about working on saturday and sunday

since nobody was willing to volunteer for the recaps we skipped it; it shows the level
of commitment; this is not a kindergarten

the program was run from monday 27.06 thru saturday 09.07 for a full 13 days of 8
hours each from 8.00 thru 16.00 hr starting and ending with a wardround with in
between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training
course and all the 9 participants were able to practice

a total of 76 operations were performed; however, considering the difficulty grading
there was only one small type IIa fistula which was operated by a trainee doctor
under strict supervision with good result; the rest was from complicated to very
complicated

this is due to the fact that many patients turned up who had been operated several
times by different surgeons in different centers; resulting in last resort final proce
dures 9x and assessment of inoperable fistulas 6x

a questionnaire was filled out by all participants for self-evaluation

a total of 10 clinical and 8 classroom lectures were delivered where all the
different topics were highlighted with special emphasis on the complex obstetric
trauma in its broadest sense including total 3° cervix prolapse
by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

their conclusion was to refer the obstetric fistula patients to a center where the necessary expertise is available since the surgery was too difficult for them

the whole training was executed according to the guidelines of isofs-figo-rcog competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on saturday 09.07.11
second session

training of 4 consultants and 5 nurses

from monday 27.06 thru sunday 10.07.11

logbook

day 0
sunday 26.06
katsina
07.00      catheter treatment 6x + surgery 3 operations + administration
14.00      traveling of chief surgeon by road to kano
17.15      arrival at hotel
17.30      supposed arrival of participants but only 2 turned up

day 1
monday 27.06
07.00      preparation of facilities
09.00      introduction of participants, explaining the training to all participants, explaining the logistics/ financial implications by representative of FMOH
10.00      surgery
89+90       complicated bilateral ureter catheterization + uvvf-repair + bilateral pcf fixation of type IIa fistula and rvf-repair of type Ia fistula in one patient para III (0 alive)
91         continent euo raphy/urethra/pcf/avw reconstruction as last resort in para I (0 alive) following urethra/ rvf-repair after yankan gishiri fistulas and then uvvf-repair of obstetric type IIb fistula
92         uvvf-repair of type IIa fistula in para I (0 alive)
13.00      selection of patients for the training workshop
14.30      postoperative wardround
15.00      end of the working day

day 2
tuesday 28.06
preparations, wardround, surgery, lectures, wardround, selection, documentation
07.00      preparations for the day
08.00      wardround
08.30      surgery with step-by-step teaching
93         state-of-the-art lecture and demonstration of reconstructive surgery in mutilated sphincter ani rupture IIb with preoperative theoretic teaching of the stool continence mechanism, explanation and demonstration of spinal anesthesia, step-by-step reconstruction of internal sphincter (anorectum), end-to-end sphincter ani reconstruction ani and repair of perineal body with (in)direct re-union of transversus perinei and bulbo- cavernous muscles in para I (1 alive) already operated 2x, now 58 days post partum
94 repair of minute tah-CS type I fistula by early closure minimum surgery in para XII (8 alive)
95 repair of extensive type IIBa fistula as result of infection (boil) at 3 yr of age, leaking for 33 years, as first stage minimum surgery in para VI (1 alive)
96 continent urethra/fascia/avw reconstruction of type IIBb operated 2x in para I (0 alive) with severe scarring, poor-quality tissue and total cervix fixation pulling on repair
97 complicated 4/5 circumferential uvvf-repair of type IIAb fistula in para I (0 alive)
98 vvf-repair of type I fistula as early closure in para IX (3 alive) due to anterior trauma
99 repair of type I fistula in para IV (1 alive)

lecture
a. stool continence mechanism, pathophysiology and development of sphincter ani rupture as cut-thru trauma and systematic reconstruction of the functional anatomy in this complex trauma

14.00 selection of patients
15.30 wardround of postoperative patients
16.15 end of the working day

day 3
wednesday 29.06
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 4
thursday 30.06
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 5
friday 01.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 6
saturday 02.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 7
sunday 03.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 8
monday 04.07
07.00 preparations for the day
08.00 wardround
08.30 surgery with step-by-step teaching

133 state-of-the-art continent urethralization/fascia/avw reconstruction for third consecutive obstetric leakage now post IIBb delivery total urine intrinsic-stress incontinence in para III (1 alive) as last resort; had successful uvvf/rvf-repair for extensive obstetric trauma during delivery I
134 step-by-step teaching of 4/5 circumferential vesicourethrostomy with transverse fascia repair/bilateral refixation onto paraurethra_euo atf of type IIAb fistula in para I (0 alive) not healed by catheter treatment
135 state-of-the-art circumferential dissection and circumferential bladder fixation into “euro” as first stage in reconstruction of extensive type IIIB fistula whereby bladder neck slipped upwards and got fixed to cephalad brim of symphysis in para I (0 alive) as part of immediate management; if necessary for continent urethra/fascia reconstruction as second stage

136 repair of type IIBa fistula as first stage in para I (0 alive) operated 1x elsewhere

137 catheter treatment of total postpartum urine intrinsic-stress incontinence grade III in para I (0 alive) leaking for 17 days

138 catheter treatment of total postpartum urine intrinsic-stress incontinence grade III in para I (alive) leaking for 8 days

13.30 selection of patients

14.00 lectures

a the complex trauma of the obstetric fistula

b pelvis anatomy and pelvis floor anatomy

c the pressure gradient of obstructed labor in relation to pelvis floor structures

15.00 postoperative wardround

15.30 end of the working day

day 9
tuesday 05.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 10
wednesday 06.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 11
thursday 07.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

day 12
friday 08.07
preparations, wardround, surgery, lectures, wardround, selection, documentation

12.00 end of the working day so that everybody can prepare for the mosque

day 13
saturday 09.07
7.00 preparations for the day

8.00 wardround

08.30 surgery with step-by-step teaching

160 demonstration of longitudinal repair of 4x1.5 cm pc fascia defect with bilateral refixation onto paraurethra-euro atf + excision of mutilated avw in post IIAb total urine intrinsic-stress incontinence grade III in para I (0 alive)

161 final assessment under spinal anesthesia of inoperable type IIIB fistula after successful rvf-repair in para I (0 alive) due to severe scarring/ everything fixed
162 disobliteration of neourethra with uvvf-repair of second obstetric type IIbB fistula in para IV (0 alive) who delivered at home after a 3-stage repair of extensive fistula post delivery III
163 repair of type Ila rvf as first stage in para I (0 alive) with also extensive type IIbB fistula operated 1x elsewhere and leaking/passing stools pv for 16 yr
164 uvvf-repair of second obstetric type IIAb fistula in para III (0 alive) who delivered at home ("miscarriage" of sb male) after successful repair post delivery I

12.00 evaluation of the training programme by trainees and trainers
small closing ceremony
handing out certificates to participants
farewell wishes
13.00 postoperative wardround
13.30 chief surgeon travelled by road to katsina
15.00 administrative work
19.00 end of the working day

kees waaldijk MD PhD                                                                 10th of July 2011
chief consultant surgeon
### Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Dr Charles Onyra</td>
<td>PMO</td>
<td>Gen Hosp</td>
<td>Gwarzo</td>
</tr>
<tr>
<td>Alh Yusuf Abdullahi Dannafada</td>
<td>PO Nurse</td>
<td>Gen Hosp</td>
<td>Gwarzo</td>
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<tr>
<td>Hajiya Binta Waziri Kin</td>
<td>ACNO</td>
<td>Gen Hosp</td>
<td>Gwarzo</td>
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<tr>
<td>Dr Aminu A Gumel</td>
<td>SME</td>
<td>FMC</td>
<td>B/Kudu</td>
</tr>
<tr>
<td>Hajiya Mariya Garba Hassan</td>
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<td>FMC</td>
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<td>Dr Adamu Tella Garba</td>
<td>PMO</td>
<td>Gen Hosp</td>
<td>Gezawa</td>
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<tr>
<td>Alh Nadabi Mohammed Shitu</td>
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<td>Gen Hosp</td>
<td>Gezawa</td>
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<tr>
<td>Hajiya Dije Adamu Gaya</td>
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<td>Gen Hosp</td>
<td>Gezawa</td>
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<td>Dr Gabari Habib Dauda</td>
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<td>MMSH</td>
<td>Kano</td>
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### Trainers

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### Facilitators pre-, intra- and post-operative care

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<td>Hajiya Usaina Suleiman</td>
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### Chief Trainer

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<tbody>
<tr>
<td>Dr Kees Waaldijk</td>
<td>Chief Consultant Surgeon</td>
<td>Babbar Ruga Hospital</td>
<td>Kano</td>
</tr>
</tbody>
</table>
obstetric fistula surgery training

third session

Babbar Ruga National Fistula Teaching Hospital
Katsina

training of 4 doctors and 8 nurses
from monday 11.07 thru sunday 14.07.11

executive summary

the original pre-exercise agreements for trainees’ criteria were:

young consultants with their pre-, intra- and post-operative nurse(s) from federal medical institutions/centers from all over the federation

however, that has watered down against all professionalism of obstetric fistula (surgical) management

now we ended up with young surgically inexperienced doctors from general hospitals in local government areas

as well, the agreement was 4 doctors and 4 nurses at a time since only 2 operating tables available

now we ended up with 4 doctors and 8 nurses which is not a problem since we can handle any amount of nurses in the pre-, intra- and post-operative care

the good news is that they are all highly interested, very cooperative and really doing their best to pick up

the lesson they learned was: immediate bladder catheterization the moment the leaking of urine becomes manifest

the trainees arrived monday 11.07.11 and were handed a cd-rom with 5 books about the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire for active participation, self-study and self-evaluation

however, none of the doctors was a consultant which made the training even more difficult since the basics in theory and practice are not present though they had a variable experience in obstetrics/gynecology

the recaps we re-introduced
the program was run from monday 11.07 thru friday 22.07 for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the 12 participants were able to practice

**a total of 84 operations** were performed; however, considering the difficulty grading there were only 2 small type IIa fistulas which were operated by a trainee doctor under strict supervision with good result; the rest was from complicated to very complicated

**a total of 10 clinical and 12 classroom lectures** were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the whole training was executed according to the guidelines of isofs-figo-rcog competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on friday 22.07.11
third session

training of 4 doctors and 8 nurses

from monday 11.07 thru sunday 14.07.11

logbook

day 0
sunday 10.07
07.00 preparations for the day + catheter treatment for fistula as immediate management
07.30 165 catheter treatment of necrotic type IIa fistula of 21-day duration in para VI (2 alive)
        166 catheter treatment of 3x1 cm necrotic type IIb fistula of 14-day duration in para I (0 alive) with total circumferential trauma and also type Ia rectovaginal fistula with total episiotomy L breakdown
08.00 wardround
08.30 surgery
        167 state-of-the-art circumferential fixation of bladder into euo with bilateral pcf refixation as minimum surgery first stage in extensive type IIb fistula of 39-day duration in para I (0 alive) with total circumferential trauma; if necessary for continent urethra as second stage
        168 primary suturing as last resort final of mutilated extensive 4 cm 0 type IIb fistula in para IV (0 alive) leaking for 30 yr which started post delivery I and operated at least 10x by 7 different surgeons
        169 complicated uvvf/tah-cs-vvf repair of strange multiple mutilated type IIa fistulas with urge incontinence in para II (0 alive) operated 1x and also type Ic stool fistula fixed onto midline sacrum
        170 circumferential repair with fixation of pc fascia/bladder peritoneum as first stage minimum of extensive type IIb fistula in para I (0 alive) not healed by immediate catheter treatment 1348 at 15-day duration
16.00 selection of patients for next day
        171 catheter treatment of necrotic type IIa fistula with atonic bladder in 43-yr-old para XI (7 alive) at 17-day duration following sb male by cs
18.00 postoperative wardround
18.30 end of the working day
        supposed arrival of participants but none turned up

day 1
monday 11.07
preparation of facilities, wardround, surgery, wardround, selection, documentation

day 2
tuesday 12.07
preparation of facilities, wardround, surgery, wardround, selection, documentation
day 3
**wednesday 13.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 4
**thursday 14.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 5
**friday 15.07**
07.00 preparations for the day
08.00 wardround
08.30 surgery with step-by-step teaching
192 **clinical lecture** and uvvf-repair as **early closure** with fascia repair of small type II\(A_a\) fistula with b characteristics within **large obstetric circumferential trauma** in para I (0 alive); leaking 45 days
193 disbliteration of neourethra + uvvf-repair as **last resort** in **second obstetric** type II\(B_b\) fistula in para II (0 alive) after in total 6 operations
194 uvvf-repair + transverse fascia repair/fixation as **early closure** of type II\(A_a\) in para VIII (3 alive)
195 circumferential dissection and circumferential repair with fascia refixation as **early closure** of type II\(A_b\) fistula in para I (0 alive) 31 days pp
12.30 break and preparations for the mosque
15.00 lectures postponed since no projector available
15.30 postoperative wardround
16.00 selection of patients
17.00 administration
18.00 end of the working day

day 6
**saturday 16.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 7
**sunday 17.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 8
**monday 18.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 9
**tuesday 19.07**
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation
day 10
wednesday 20.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 11
thursday 21.07
preparations, recap, wardround, surgery, lectures, wardround, selection of patients and documentation

day 12
friday 22.07
07.00 preparations for the day
08.00 recap of day 11
08.30 wardround
09.00 surgery with step-by-step teaching
240 additional fixation of cervix at R as second stage according to master plan since 2° cervix prolapse at R following successful fixation at L as first stage for total cervix prolapse in 16-yr-old para I (alive) as uterus-saving mini-invasive procedure
241 additional fixation of R cervix as second stage after successful fixation at L as first stage of total cervix prolapse in para VI (4 alive) who had 3 live children with total prolapse for 12 yr

nb all the patients in the hospital were attended to and there are no more patients left on the waiting list
11.30 handing out certificates to all participants
votes of thanks from both trainers and trainees
official closure of the training workshop
12.00 postoperative wardround
12.30 end of the working day so that everybody can prepare for the mosque
16.00 travelling of the surgical team by road from babbar ruga to kofan gayan hospital in zaria since they have over 10 patients on the waiting list and we have to continue with our work
18.15 safe arrival of the team in the hotel

saturday 23.07
08.00 preparations for the day
08.30 surgery
242 circumferential dissection, advancement, circumferential end-to-end ve sicourethrostomy + bilateral pcf refixation as early closure of large type IIAb fistula in para I (0 alive) at 52 days
243 complicated repair of ragged iatrogenic longitudinal type IIa fistula in para X (4 alive) who delivered sb female vaginally and then had lapa rotomy/hysterectomy same day for reasons not given
244 repair of minute < 0.1 (1.5 after dissection) cm type I sth-cs-vcf fistula in para XI (7 alive) who was leaking little with spontaneous miction
245 transverse pc fascia repair/bilateral refixation with in the process closure of small type IIa fistula with b characteristics in para VII (2 alive); who cares about obstetric care

15.30 postoperative wardround
16.00 end of the working day

sunday 24.07
08.00  wardround
09.00  surgery
246 uvvf-repair + transverse pcf fixation as early closure of type IIa fistula in para I (0 alive) leaking for 60 days
247 catheter treatment of 4 cm 0 necrotic type II in para I (0 alive) leaking 10 days
248 catheter treatment of type IIa fistula in para II (1 alive) leaking for 40 days (still chance of healing) who cannot stand/walk without support not a single patient left on the waiting list
11.30  postoperative wardround
12.00  traveling of chief surgeon to kano as normal rhythm
14.15  arrival in hotel and end of the working day

kees waaldijk MD PhD
chief consultant surgeon

22th of July 2011
### Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Location</th>
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<tbody>
<tr>
<td>Dr Bawa Dogara Bure</td>
<td>Atbuth</td>
<td>Bauchi</td>
</tr>
<tr>
<td>Mrs Alang B Larau</td>
<td>Gen Hosp</td>
<td>Daura</td>
</tr>
<tr>
<td>Dr Ahmed Saheed Bolaji</td>
<td>Gen Hosp</td>
<td>Funtua</td>
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<tr>
<td>Alh Aliyu Husaini Maibara</td>
<td>Gen Hosp</td>
<td>Kankara</td>
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<tr>
<td>Hajia Aisha Namadi</td>
<td>Gen Hosp</td>
<td>Funtua</td>
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<tr>
<td>Dr Sani Dandela</td>
<td>Gen Hosp</td>
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<td>Hajia Murja Salihu Sagir</td>
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<td>Dr Hayatu Tanimu</td>
<td>Gen Hosp</td>
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<tr>
<td>Alh Bello Gambo</td>
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<tr>
<td>Mrs Osuagwu Eunice Chinyere</td>
<td>CNO</td>
<td>Zaria</td>
</tr>
<tr>
<td>Hajiya Aishatu Ahmed</td>
<td>CNO</td>
<td>Zaria</td>
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### Trainers

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<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</tr>
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<tbody>
<tr>
<td>Dr Said Ahmad</td>
<td>Consultant Obs&amp;Gyn</td>
<td>VVF Center</td>
</tr>
<tr>
<td>Dr Idris A Halliru</td>
<td>Moh</td>
<td>Katsina</td>
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### Facilitators Pre-, Intra- and Post-Operative Care

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Dr Abdulmajid Mudasiru</td>
<td>Cmd</td>
<td>Babbar Ruga Hospital</td>
</tr>
<tr>
<td>Alh Abdullahi Haruna</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
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<tr>
<td>Alh Kabir K Lawal</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
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<tr>
<td>Alh Gambo Lawal</td>
<td>CNO</td>
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<tr>
<td>Hajiya Adetutu Ajagun</td>
<td>CNO</td>
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<tr>
<td>Hajiya Amina Mamman</td>
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</table>
obstetric fistula surgery training

Laure Fistula Center
Murtala Muhammad Specialist Hospital
Kano

fourth session

training of 6 consultants/doctors and 4 nurses

from monday 12.09 thru friday 23.09.11

executive summary

the trainees arrived monday 12.09.11 and were handed a cd-rom with 5 books about the obstetric fistula, the isofs-figo-rcog training manual, a logbook and questionnaire for active participation, self-study and self-evaluation

the program was run from monday 12.09 thru friday 23.09 for a full 12 days of 8 hours each from 8.00 thru 16.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice

a total of 55 operations were performed; however, considering the difficulty grading there was none suitable for repair by the trainees

this is due to the fact that many patients turned up who had been operated several times by different surgeons in different centers

one of the operating lights broke down and since we could not get repair/replacement in time we had to continue on one operating table

a questionnaire was filled out by all participants for self-evaluation

since we had problems with the projector no classroom lecture could be delivered

still a total of 9 clinical lectures were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse
by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

the whole training was executed according to the guidelines of global competency-based training manual

all the trainees were supposed to keep meticulous documentation of what they saw, did and learned in their logbook

the trainees travelled home on friday 25.09.11

a start was made with pessary treatment for “incurable” postrepair incontinence since urinary diversion is not an option
## fourth session

training of 6 consultants/doctors and 4 nurses

from monday 12.09 thru friday 23.09.11

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### logbook

#### day 1

**monday 12.09**

<table>
<thead>
<tr>
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<th>Activity</th>
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<tbody>
<tr>
<td>07.00</td>
<td>preparation of facilities</td>
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<tr>
<td>08.00</td>
<td>introduction of participants and outlining the course</td>
</tr>
<tr>
<td>09.00</td>
<td>surgery</td>
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<tr>
<td></td>
<td><strong>249</strong> clinical lecture and catheter treatment of overflow/intrinsic/stress incontinence grade III in para III (all alive) leaking for 12 days</td>
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<tr>
<td></td>
<td><strong>250</strong> catheter treatment of total overflow/intrinsic/stress incontinence grade III in para I (0 alive) leaking for 15 days</td>
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<tr>
<td></td>
<td><strong>251</strong> catheter treatment for total intrinsic/stress incontinence grade III in para I (0 alive) leaking for 8 days</td>
</tr>
<tr>
<td>10.00</td>
<td>follow-up consultation in 9 patients</td>
</tr>
<tr>
<td>10.30</td>
<td>introduction of participants, explaining the training to all participants, explaining the logistics/financial implications by representative of FMOH</td>
</tr>
<tr>
<td></td>
<td>surgery with step-by-step teaching</td>
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<tr>
<td></td>
<td><strong>252</strong> urethralization + bladder closure for post IIa intrinsic/stress incontinence grade III in para I (0 alive): fistula had healed by immediate catheter treatment for 4 wk</td>
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<tr>
<td></td>
<td><strong>253</strong> urethralization for genuine postpartum intrinsic/stress incontinence grade II–III in para V (3 alive) not responding to bladder drill</td>
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<td><strong>254</strong> uvf-repair + transverse fascia repair as early closure for medium-size type IIa fistula in para V (3 alive) leaking 42 days</td>
</tr>
<tr>
<td></td>
<td><strong>255</strong> uvf-repair + transverse fascia repair as early closure for small type IIa fistula in para XIV (9 alive) leaking 30 days</td>
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<tr>
<td>14.00</td>
<td>selection of patients for the training workshop</td>
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<tr>
<td>15.00</td>
<td>wardround of postoperative patients</td>
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<tr>
<td>15.30</td>
<td>end of the working day</td>
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<tr>
<td>17-18.00</td>
<td>administration and documentation</td>
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</tbody>
</table>

#### day 2

**tuesday 13.09**

preparations for the day, wardround, surgery, selection of patients, wardround and documentation

#### day 3

**wednesday 14.09**

preparations for the day, wardround, surgery, selection of patients, wardround and documentation
day 4
thursday 15.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 5
friday 16.09
07.00  preparations for the day
08.00  wardround
08.30  surgery with step-by-step teaching
  276 transverse repair of mutilated lungu-lungu type IIaAa tah-cs fistulas at fixed vault in para II (0 alive) leaking 11 yr and operated 4x elsewhere
  277 highly complicated repair of intracervical type I cs-fistula with fixed cervix as early closure in para III (1 alive) leaking 38 days
11.00  postoperative wardround
11.30  chief surgeon travelled to zaria since kano state on strike and no operations on saturday and sunday
14.00  arrival in hotel; end of working day

day 6
saturday 17.09
zaria
08.00  selection of patients + preparations for the day
08.30  surgery
  278 catheter treatment for overflow incontinence due to atonic bladder in para I (alive) leaking urine for 3 days
  279 transverse closure of type I sth-cs vesicocervicouterovaginal fistula in para X (8 alive) with total anterior uterus wall loss so that posterior uterus becomes posterior bladder
  280 excision of mutilation-scar tissue + urethralization + euo-rhaphy for total post IIbA repair total intrinsic_stress incontinence grade III in para VII (2 alive)
  281 lungu repair for total post IIAb intrinsic-stress incontinence grade III with atonic bladder component in para I (0 alive)
  282 step-by-step anorectum closure + sphincter ani reconstruction + perineal body repair for sphincter ani rupture in para X (9 alive)
    + clinical lecture about sphincter ani rupture, mechanism of action
  283 step-by-step anorectum closure + sphincter ani/perineal body reconstruction as early repair in para I (alive) operated 1x with stool_flatus incontinence for 12 days
15.00  wardround
15.30  travel by car to katsina
18.30  arrival in hospital
selection of patients for next day + administration
19.00  end of working day

kano
no operations since all the staff of kano state is due for personal screening of their employment particulars
day 7
sunday 18.09
katsina
07.00 preparations for the day only to find out strike
08.00 administration + documentation
13.30 traveling of chief surgeon by road to kano
17.00 arrival in hotel end of “working” day

kano no operations since clinic day

day 8
monday 19.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 9
tuesday 20.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 10
wednesday 21.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 11
thursday 22.09
preparations for the day, wardround, surgery, selection of patients, wardround and documentation

day 12
friday 23.09
07.00 preparations for the day
08.00 wardround
08.30 surgery with step-by-step teaching
302 bilateral pc fascia fixation as last resort final for post IIAb total intrinsic stress incontinence III in para VII (0 alive) as third obstetric leakage viz post delivery II, III and VII and operated 5x
303 bilateral pc fascia fixation for post IIAb total intrinsic stress incontinence grade III in para I (0 alive) operated 2x
11.00 evaluation of the training programme by trainees and trainers
small closing ceremony
handing out of the certificates by dr momah, director department of family health, federal ministry of health, abuja
farewell wishes
11.45 postoperative wardround
12.00 end of the working day so that everybody can prepare for the mosque

kees waaldijk MD PhD
chief consultant surgeon

25th of september 2011
### Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Facility</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>Dr Isyaku Dauda</td>
<td>PMO</td>
<td>AKTH</td>
<td>Kano</td>
</tr>
<tr>
<td>Dr Halima Bello</td>
<td>Senior Registrar</td>
<td>Guje Hosp</td>
<td>Abuja</td>
</tr>
<tr>
<td>Dr Duum N Kwachukwu</td>
<td>Consultant</td>
<td>FMC</td>
<td>Bida</td>
</tr>
<tr>
<td>Dr Hadiza A Usman</td>
<td>Consultant</td>
<td>UMTH</td>
<td>Maiduguri</td>
</tr>
<tr>
<td>Dr Ayodeji Olorunsogo</td>
<td>Registrar</td>
<td>FMC</td>
<td>Gome</td>
</tr>
<tr>
<td>Dr Safiya Faruk Usman</td>
<td>Registrar</td>
<td>AKTH</td>
<td>Kano</td>
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<tr>
<td>Mrs Edewede Glory</td>
<td>Sno</td>
<td>FMC</td>
<td>Gombe</td>
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<td>Hajiya Mariya Mala Yusuf</td>
<td>CNO</td>
<td>UMTH</td>
<td>Maiduguri</td>
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<td>Hajiya Aish Shehu Adamu</td>
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<td>MMSH</td>
<td>Kano</td>
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<tr>
<td>Mrs Ikupolati Naomi F</td>
<td>CNO</td>
<td>FMC</td>
<td>Bida</td>
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<tr>
<td>Dr Gabari Habib Dauda</td>
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<td>MMSH</td>
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### Trainers

<table>
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<th>Name</th>
<th>Title</th>
<th>Facility</th>
<th>Location</th>
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<tbody>
<tr>
<td>Dr Idris Suleiman Abubakar</td>
<td>Consultant Obs&amp;Gyn</td>
<td>AKTH</td>
<td>Kano</td>
</tr>
<tr>
<td>Dr Amir Iman Yola</td>
<td>PMO</td>
<td>MMSH</td>
<td>Kano</td>
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</table>

### Facilitators Pre-, Intra- and Post-Operative Care

<table>
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<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Alh Abdullahi Haruna</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
<td>Kano</td>
</tr>
<tr>
<td>Hajiya Binta Musa</td>
<td>CNO</td>
<td>MMSH</td>
<td>Kano</td>
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<tr>
<td>Hajiya Asma’u Mado</td>
<td>CNO</td>
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<tr>
<td>Hajiya Mairo Ahmed</td>
<td>CNO</td>
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<tr>
<td>Hajiya Zainab Mohammed</td>
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<tr>
<td>Hajiya Usaina Suleiman</td>
<td>No</td>
<td>MMSH</td>
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### Chief Trainer

<table>
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<tr>
<th>Name</th>
<th>Title</th>
<th>Facility</th>
<th>Location</th>
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<tbody>
<tr>
<td>Dr Kees Waaldijk</td>
<td>Chief Consultant Surgeon</td>
<td>Babbar Ruga Hospital</td>
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</tbody>
</table>
since many patients from department du zinder are coming to katsina and kano for their surgery it is important to visit this center on a regular base

the border is just an artificial line since the community of southern niger and northern nigera are the same hausa/fulani with frequent cross-border intermarriage

a total of 16 procedures were performed in 16 patients

the operations varied from complicated to very complicated since the majority of the patients had been operated several times
vvf workshop zinder
sokoto
day-to-day report
28th september thru 1st october 2011

**wednesday 28th** of september 2011
we left katsina at around 14.30 hr and after some 250 km by toyota jeep we arrived safely in zinder at around 18.30 hr where we checked into the hotel we faced problems at the niger side of the border since our nigerien papers were not in order; after a lot of discussion we managed to pass

**thursday 29th** of september 2011
six procedures:
01 excision of scar tissue + repair of type I sth-CS fistula in para IX (2 alive) operated 1x
02 excision of scar tissue + **complicated** transverse repair + bilateral pcf fixation of **extensive** IIa fistula in para IV (2 alive) operated 1x
03 highly complicated urethra/fascia/avw reconstruction of **severely mutilated** type IIb fistula as **final try** in para I (0 alive) operated 5x with healed rvf but still colostomy
04 paraurethra_euo pcf fixation as **last resort** of total post IIAb intrinsic_stress incontinence grade III in obese para I (0 alive) operated 2x
05 longitudinal repair + pcf fixation + perineal body reinforcement of residual minute type IIb fistula with **objective** stress incontinence in para III/IV (alive 0) as 2nd/3rd fistula operated in total 7x
06 complicated transverse closure of **mutilated** type IIa fistula in para VII (4 alive) operated 4x
and wardround from **8.00 to 18.30 hr**

**friday 30th** of september 2011
five procedures:
07 difficult transverse closure + pcf refixation of **mutilated** type IIb fistula in para I (0 alive) operated 7x; with obesity ++
08 complicated urethra “repair” of residual type IIb fistula in para VII (2 alive) operated 6x; with intrinsic incontinence
09 paraurethra_euo pcf fixation of total post IIAb intrinsic incontinence in para III (0 alive) operated 3x; with obesity ++
10 urethra/avw reconstruction of **extensive** type IIa fistula in para I (0 alive) operated 3x
11 complicated repair of extensive type lb rvf as minimum surgery first stage in para I (0 alive); operated 4x for vvf (now post IIb incontinence) + colostomy and wardround from **8.00 to 18.30 hr**
saturday 1st of october 2011

five procedures
12 transverse repair + pcf refixation of type IIa fistula in para II (1 alive) operated 2x
13 transverse repair + pcf fixation of mutilated type IIa fistula in para I (alive 0) operated 2x
14 tricky transverse repair of type Ics fistula with anterior cervix loss in para V (2 alive) operated 2x; and obesity ++
15 transverse repair + pcf fixation of mutilated type IIAb fistula in para I (alive 0) operated 1x; with objective stress incontinence
16 highly complicated longitudinal repair of severely mutilated type IIa cs-uvcv fistula in para VI (5 alive) operated 8x and wardround from 8.00 to 15.00 hr

comments
traveling same 250 km back to katsina where we arrived safely, no problems at the border since we came with fresh papers mung gode Allah

remarks
it looks so simple but learning a trick is not sufficient since it takes a life time of hard intensive study to master the art & science of obstetric fistula surgery

time spent
a total of 28 hours on the workshop and 8 hours on travelling during 3.5 days

conclusion
it was a fine workshop where 16 operations were performed in 16 patients

kees waaldijk, MD PhD
chief consultant fistula surgeon

many thanks to
the sponsors
waha-international
gouvernement du zinder
all the staff of the maternité central du zinder for their continuing support

5th of october 2011
vvf workshop maradi

centre hospitalier régional du maradi
maradi

monday 3rd thru saturday 8th october 2011

executive summary

A total of 28 procedures were performed in 28 patients.

A total of 4 doctors attended for (further) training.
Monday 3rd of October 2010
We left Katsina at around 14:00 hr and after some 90 km by Toyota jeep we arrived safely in Maradi at around 16:30 hr where we checked into the hotel where we faced problems with the electricity; no problem at the border since all our papers were in order.

Tuesday 4th October 2011
We proceeded to Centre Hospitalier Régional du Maradi, the venue of the activities, at around 8:00 hr and started to work.

Seven procedures:
01 Transverse repair of type I tah-cs fistula whereby abdomen opened in para IV (1 alive) operated 4x with traumatized urethra_euo
02 Transverse repair of type IIAa fistula and highly complicated longitudinal tah-cs repair in para V (2 alive) operated 2x; obesity ++
03 Transverse “repair” of inoperable type IIAa fistula as one last resort final try in para I (0 alive operated 2x; poor-quality tissue and everything fixed
04 Repair of multiple small fistulas as part of strange type IIAa fistula in para I (0 alive) treated by catheter and caustics
05 Repair + pc fascia fixation of minute < 0.1 cm type IIAa fistula at tip of ^^ structure in para I (0 alive)
06 Bilateral ureter catheterization + repair + pc fascia fixation of type Ila fistula with bladder base prolapse in para IV (2 alive)
07 Catheter treatment followed by bladder drill for long-standing congenital atonic bladder in para 0 leaking only whilst sitting for 15 yr since she was born and operated 1x; this is not for surgery and wardround from 8.00 to 18.30 hr

Wednesday 5th October 2011
Seven procedures:
08 State-of-the-art repair with pc fascia repair/fixation of type IIAa fistula with characteristics in para VII (alive) operated 2x
09 Bilateral ureter catheterization with transverse repair with pc fascia repair/fixation of type IIAa fistula in para I (0 alive)
10 Transverse bladder/urethra closure + pc fascia fixation to paraurethra_euo at R of type IIAa fistula in para XV (2 alive) operated 3x and leaking for 35 yr
11 Longitudinal bladder to pubic bone suturing of minute residual type IIAb fistula fixed extremely R in para I (0 alive) operated 3x; small rvf fixed onto spine R not repaired in the same session
12 Transverse repair of type I fistula in severely obese para V (0 alive) after cs-sth bco obstructed last twin labor operated 2x and leaking 15 yr
13 transverse closure and bilateral pc fascia refixation of type IIb fistula in para V (2 alive) who delivered 4 times with fistula leaking 21 yr and operated 4x including neourethra.
14 urethralization by longitudinal fascia repair and bilateral fixation of post IIb Yankan Gishiri fistula total urine intrinsic stress incontinence in para 0 and wardround from 8.00 to 18.30 hr.

Thursday 6th of October 2011
Eight procedures:
15 bilateral ureter catheterization + “circumferential” repair of type IIb fistula as early closure leaking for 58 days.
16 repair of “identical” type I fistula in para IV (1 alive) after successful repair post delivery I; was only 5 days in hospital for last delivery and nothing done; what about prevention?
17 dilatation of bladder neck stenosis + foley ch 14 in 7-yr-old girl with supra pubic bladder catheter bco urine retention following yankan gishiri by wanzami for resons unknown.
18 distal para-“euo” fixation of euo_avw for total post IIb intrinsic incontinence in para V (3 alive) operated 7x and leaking 11 yr post delivery IV.
19 complicated bilateral ureter catheterization, 4/5 circumferential urethrovesi costomy + bilateral pc fascia refixation for extremely mutilated IIb fistula operated 4x by obstetric fistula tourists.
20 assessment of inoperable IIb fistula in para II (1 alive) operated 4x and leaking 32 years.
21 transverse repair/bilateral pc fascia fixation + repair of type IIa fistula with in transverse fascia defect in para V (5 alive) operated 1x.
22 severing of redundant lengthening uroplasty and bilateral fixation of “pcf” cervix onto paraurethra_euo atf for total post IIb intrinsic stress incontinence grade III in para II (0 alive) leaking for 20 yr and operated 4x and wardround from 8.00 to 18.30 hr.

Friday 7th October 2011
Six procedures:
23 dilatation of euo stenosis, foley ch 18 and assessment of ureter fistula R in para XI (4 alive) to be referred to urologist for abdominal reimplantation.
24 urethra_euo narrowing/repositioning R + bilateral pc fascia fixation as last resort for total post IIb intrinsic stress incontinence in para VII (2 alive) operated at least 4x and leaking 25 yr.
25 excision of excessive scar tissue + transverse fascia repair/bilateral refixation with transverse closure of type IIb fistula in para V (3 alive) operated 1x.
26 excision of scar tissue + transverse repair of type IIa fistula with additional vacuum trauma in para I (0 alive).
27 transverse pc fascia repair with transverse closure of type IIa fistula in para VI (3 alive) operated 2x and leaking 15 yr.
28 bilateral jureter catheterization, circumferential end-to-end vesicourethrosto my + bilateral pcf refixation of type IIb fistula in para I (0 alive) leaking 3 mth and wardround.

Saturday 8th October 2011
We left maradi by 9.00 hr, crossed the border in good time and arrived safely in Katsina at around 10.30 hr.
remarks
it looks so simple but learning a trick is not sufficient since it takes a lifetime of hard intensive study to master the art & science of obstetric fistula surgery

time spent
a total of 40 hours on the workshop and 4-5 hours on travelling during 5 full days

conclusion
it was a fine workshop where 28 operations were performed in 28 patients

kees waaldijk, MD PhD
chief consultant fistula surgeon

9th october 2011

participants
dr gandar chr maradi
dr amadou chr maradi
dr yusuf maternité central zinder
dr moustapha diallo maternité tassigui taoua

many thanks to
the sponsors
waha-international
unfpa
gouvernement du maradi
all the staff of the centre hospitalier du maradi for their support
obstetric fistula surgery training
Babbar Ruga National Fistula Teaching Hospital
Katsina

fifth and last session
training of 4 consultants/doctors and 6 nurses
from monday 17.10 thru sunday 30.10.11

executive summary

the trainees arrived monday 17.10.11 and were handed a cd-rom with 5 books about the obstetric fistula for self-study, a copy of the training manual and a questionnaire

the program was run for a full 12 days of 10 hours each from 8.00 thru 18.00 hr starting and ending with a wardround with in between surgery and lectures

on special request by all the trainees spinal anesthesia became part of the training course and all the participants were able to practice

a total of 4 doctors and 6 nurses attended the intensive training course

out of the total of 81 operations performed only one was performed by a trainee doctor under strict supervision with good result; more was not possible since the difficulty grading increased during the course

a total of 11 clinical and 13 classroom lectures were delivered where all the different topics were highlighted with special emphasis on the complex obstetric trauma in its broadest sense including total 3° cervix prolapse

a questionnaire was filled out by all participants for self-evaluation

by the end of the course all the participants had a far better understanding of the complex trauma of the obstetric fistula and its causes and of the urine and stool continence mechanism in the female

however, considering the limited time it can only be considered as an introduction to its (surgical) management; but at least they all know exactly what not to do which is very important

on friday 28.10 an official closing ceremony was conducted by the senior special adviser to the president on mdg with guest of honour her excellency the wife of the governor of katsina state where the certificates were handed out to the trainees and afterwards the newly constructed wards, ambulances etc by mdg were commissioned

the trainees travelled home on saturday 12.06.11
fifth and last session
training of 4 consultants/doctors and 6 nurses
from monday 17.10 thru friday 28.10

logbook

day 0
sunday 16.10
07.00 to 18.00 6 operations + preparation of facilities

day 1
monday 17.10
07.00 preparation of hospital
08.00 arrival of first tranees
10.00 small welcome “ceremony” with introduction of participants, outlining of training objectives and tour of the center
12.00 surgery with step-by-step teaching
304 + 305 bilateral ureter catheterization with transverse repair of type IIa fistula and state-of-the-art anorectum closure, sphincter ani reconstruction and perineal body repair of type IIb fistula in para IV (1 alive) + clinical lecture about principles of obstetric fistula repair + clinical lecture about stool continence mechanism and mechanism of action and reconstructive principles of sphincter ani rupture repair
306 suturing bladder onto symphysis over lungu-lungu type IIAb fistulas in para I (0 alive) leaking 5 yr and operated 1x
307 closure + bilateral pc fascia refixation of minute residual type fistula as good result of primary suturing of mutilated IIAb fistula in para I (0 alive) operated 3x
308 transverse closure of minute type I cs-fistula in para I (0 alive) leaking 1 yr
309 transverse closure of type I fistula against R anterior cervix in para VII (6 alive)
17.00 postoperative wardround
17.30 selection of patients for the training workshop + documentation
18.30 end of working day

day 2
tuesday 18.10
07.00 preparation of the hospital
08.00 handing out cd with books, global competency-based training manual and questionnaire for self-evaluation to all participants
08.30 wardround
09.00 surgery with step-by-step teaching
310 transverse pc fascia repair/bilateral refixation with transverse closure of small lungu type IIAb fistula in para I (0 alive) leaking 2 yr and operated 1x + clinical lecture about + demonstration of urine continence mechanism and importance of pubocervical fascia + pelvis floor anatomy
311 urethralization by longitudinal fascia repair/bilateral fixation for total post IIAb delivery urine intrinsic_stress incontinence grade III in para VII (5 alive)
312 catheterization of L ureter + early 4/5 circumferential closure + bilateral pcf refixation of type IIb fistula as 3rd obstetric fistula in para VII (2 alive) leaking 74 days
313 catheterization R ureter + early transverse repair of type IIa fistula with bladder base prolapse in para I (0 alive) leaking 68 days
314 early closure of small type I cs-fistula in para I (0 alive) leaking for 75 days
315 early closure of small type IIa fistula slightly at R in para II (1 alive) leaking 46 days
316 early closure type I cs-fistula in para X (7 alive)
317 complicated longitudinal closure of intracervical type I cs fistula in para X (4 alive)

17.30 wardround of postoperative patients
18.00 selection of patients, administration and documentation
19.00 end of the working day

day 3
wednesday 19.10
07.00 preparations for the day
08.00 recap of the previous day
08.30 wardround
09.00 surgery: with step-by-step teaching
318 + 319 circumferential repair with longitudinal fascia repair of type IIb fistula and anorectum/sphincter ani/perineal body reconstruction of type IIb fistula in para I (0 alive) with severe iatrogenic trauma by 2 operations elsewhere
320 complicated 4/5 circumferential repair with bilateral pcf refixation of type IIAb fistula fixed to cephalad symphysis in para VI (2 alive)
321 bilateral fixation of pcf onto paraurethra_euo aff for post IIbA total incontinence grade III in para 0; yankan gishiri for ba hanya
322 catheter treatment for postpartum total urine intrinsic incontinence grade III in para I (0 alive) leaking 18 days
323 catheter treatment for long-standing postpartum atonic bladder in para I (alive) to be followed by bladder drill and then re-evaluation
324 repair of type I cs fistula as second stage after successful closure of type IIa fistula as first stage in para VIII (4 alive)
325 early circumferential repair + pcf fixation of type IIAb fistula in para I (0 alive) leaking 67 days
326 repair of residual type I tah-Cs fistula in para II (all alive) with cervix remnants fixed midline

15.00 two classroom lecture
   a sphincter ani rupture; a complex trauma
   b fistulas for beginners
16.00 postoperative wardround
16.30 selection of patients, administration and documentation
19.00 end of the day
day 4
thursday 20.10
07.00 preparations for the day
08.00 recap of the previous day
08.30 wardround
09.00 surgery with step-by-step teaching

327 + 328 state-of-the-art urethralization by longitudinal fascia repair + transverse fixation for total genuine (IIAb) intrinsic_stress incontinence and transverse closure of type Ia stool fistula in para I (0 alive) + clinical lecture about mechanism of incontinence and importance of pubocervical fascia in stabilizing/securing urethra_euo in its anatomic position

329 step-by-step demonstration of excision of scar tissue and para urethra_euo fixation of fascia for post IIb total intrinsic incontinence in para III (all alive); yankan gishiri for 3° cervix prolapse

330 transverse fascia repair/bilateral refixation + uvf-repair of second obstetric type IIAb fistula in para VII (1 alive) who had successful circumferential repair post delivery I fifteen years ago

331 bilateral ureter catheterization + circumferential repair first stage for “inoperable” type IIb fistula in para VIII (3 alive) with poor tissue quality and everything fixed due to continuous stool contamination from end-standing sigmoidostomy into vagina of type Ic stool fistula

332 catheter treatment for long-standing atonic bladder following cs in para I (0 alive)

333 bilateral ureter catheterization and transverse repair of type IiAa fistula as early closure in para I (0 alive) leaking 70 days

334 urethralization by longitudinal fascia repair/transverse fixation for post IIAb total intrinsic_stress incontinence grade III in para XI (6 alive)

335 longitudinal repair of large type IiAa fistula in para VI (1 alive)

no lectures since surgery ended 17.15 hr

17.30 postoperative wardround
18.00 selection of patients, administration and documentation
19.00 end of the day

day 5
friday 21.10

07.00 preparations for the day
08.00 recap of previous day
08.30 wardround
09.00 surgery with step-by-step teaching

336 transverse fascia repair with transverse closure of midline 1.5 cm 0 type IiAa fistula with normalization of euo by doctor trainee under direct supervision by chief consultant in para I (0 alive)

337 transverse repair of intracervical type I fistula in para III (2 alive); delivery II by cs, now obstetric trauma superimposed upon cs trauma

338 transverse bladder onto posterior cervix remnants closure of type I sth-cs fistula in para XII (6 alive)

339 transverse closure + bilateral pcf fixation for minute second obstetric lungu type IIAb fistula in para III (0 alive); excision of scar tissue ++

13.00 break
two classroom lectures
c the complex trauma of the obstetric fistula
d pelvis anatomy + pelvis floor anatomy: arcus tendineus fasciae, pubo cervical fascia, levator ani muscle etc etc

postoperative wardround

selection of patients, administration and documentation

end of the day

day 6

saturday 22.10

07.00 selection of patients + preparations for the day
08.00 recap of previous day
    two classroom lectures
e genuine intrinsic-stress incontinence and its conservative/surgical management
f the obstetric trauma in relation to pelvis inlet and structures
08.30 wardround
09.00 surgery with step-by-step teaching

340 state-of-the-art lecture and step-by-step demonstration by chief surgeon of circumferential fistula type IIAb in para XII (10 alive) with total circumferential trauma + 2° cervix prolapse
341 reconstructive surgery of obstetric trauma in severely mutilated type IIAb fistula in para III (0 alive) operated 2x and planned for urinary diversion
342 transverse fascia repair + fistula closure of third obstetric type IIaA fistula within large 5x1 cm transverse pcf defect in para IX (6 alive); previous two fistulas healed by immediate catheter insertion
343 repositioning of euo into anatomic position for post mutilated type IIba total intrinsic_stress incontinence in para X (7 alive) operated 3x; the problem mutilation + pull by fixed cervix; as last resort
344 complicated repair of minute type I fistula fixed to i spine R in para IX (5 alive) following colpocleisis elsewhere
345 assessment of ureter fistula type III after cs in para II (0 alive) after successful cs-vcvc-repair
346 ureter catheterization R + transverse repair of large type I cs-fistula in para III (2 alive)
16.30 wardround
17.00 selection of partients, administration and documentation
19.00 closure of the day

day 7

sunday 23.10

07.00 preparations for the day
08.00 wardround; trainees preferred to have a rest day
09.00 surgery

347 ureter catheterization L and real reconstructive surgery of 2nd obstetric type IIAb fistula in para VIII (1 alive) who delivered 6x after successful fistula repair post delivery II
348 step-by-step identifying and then systematic reconstruction of the defects in genuine intrinsic incontinence in para X (4 alive)
349 assessment of total post IIaA intrinsic incontinence and type Ic rvf in para II (0 alive); operation postponed bco heavy stool contamination, no electricity + Sunday
350 assessment of ureter fistula L after sth-cs in para XIII (8 alive) with total intrinsic incontinence; successful type IIa repair 4 mth ago
351 instruction of patient + mother about repeat self-dilatation by torch light covered by condom bco congenital vagina malformation; wanzami yankan gishiri (scarification) without resulting in leaking urine
16.30 wardround
17.00 selection of patients, administration and documentation
18.00 closure of the day

day 8
monday 24.10
07.00 preparations for the day
08.00 recap of saturday
08.15 classroom lectures on conservative and surgical treatment of postpartum intrinsic stress incontinence grade III
09.00 wardround
09.30 surgery with step-by-step surgery
352 + 353 reconstructive fascia repair with transverse closure of minute type IIa fistula with total intrinsic incontinence and anorectum repair + sphincter ani reconstruction + perineal body repair of type IIb stool fistula in para III (1 alive) operated 1x for sphincter ani rupture
354 state-of-the-art urethralization as reconstruction by longitudinal fascia repair/refixation for total post IIb intrinsic_stress incontinence grade III in para I (0 alive); both rvf/vvf healed
355 ”repair” of residual severely scarred small fistula with objective in intrinsic_stress incontinence in para XIV (6 alive)
356 complicated transverse repair of residual small fistula in para IX (0 alive) with postpoliomyelitis syndrome R operated 2x
357 urethra reconstruction for total post IIb intrinsic_stress incontinence grade III whereby euo posteriorly drawn inside in para VI (1 alive)
14.00 chief consultant travelled to kano for some other business and for the training of senior registrars from aminu kano teaching hospital
17.00 postoperative wardround
17.30 selection of patients
18.30 end of the day

day 9
tuesday 25.10
07.00 preparations for the day
08.00 recap of previous day
08.30 wardround
09.00 surgery with step-by-step teaching
358 paraurethra_euo fascia fixation for post IIb delivery total intrinsic_stress incontinence III in para II (0 alive) as second obstetric leakage after successful vvf/rvf-repair post delivery I
359 repair of intracervical type I cs-fistula in para X (2 a.live) with cervix fixed/retracted
360 assessment of ureter fistula by dye test in para VIII (7 alive); since ureter could not be catheterized referred to urologist for abdominal reimplantation

in kano by chief consultant teaching senior registrars in obs&gyn

361 **Clinical Lecture** + transverse fascia repair/fixation with transverse closure of type IIa fistula within large transverse pcf defect in para I (0 alive)

362 **Step-by-Step** bilateral ureter catheterization + transverse closure of 2.5 cm 0 type I/IIa cs-fistula with large transverse pcf defect at 3 cm from euo in para VIII (4 alive)

363
13.30 chief consultant travelled back to katsina to continue the training
16.00 classroom lectures by dr halliru idris
17.00 wardround
17.30 selection of patients
18.30 end of working day

**Day 10**

**Wednesday 26.10**

07.00 preparations for the day
08.00 recap of previous day
08.15 classroom lectures
d
classicification of vvf as based on qualitative and quantitative tissue loss of continence mechanism with consequences for operation technique and prognosis as to healing and as to continence
i classification of rvf as based and involvement of continence mechanism with consequences for operation technique

09.00 wardround
09.30 surgery with step-by-step teaching

364 gradual dilatation of pin-hole non-scarred euo stenosis with dysuria + overflow incontinence as early management in para I (alive) leaking 55 days; further catheter treatment as for atonic bladder

365 **State-of-the-art** longitudinal fascia repair for extensive postpartum cystocele in para X (6 alive); patient delivered 6x vaginally after cervix fixation for 3° cervix prolapse 19.10.03; cervix still more or less in anatomic position which is evidence-based proof that our technique for 3° cervix prolapse is functioning

366 transverse fascia repair/refixation with fistula closure for type IIab fistula in para I (0 alive) with cervix fixed onto i spine R

367 transverse repair of small type IIa fistula in para VI (0 alive) as second obstetric fistula; why did it not heal at first attempt?

368 vaginal cystostomy, stone removal and ps-like aw closure for stone-induced urge incontinence in para X (4 alive) who had successful vvf-repair in babbar ruga 27 years ago post delivery I

369 ps-like closure of “inoperable” type IIab fistula after bladder stone removal in para I (0 alive); after successful closure by multiple repairs she developed bladder stone which perforated into vagina

17.00 postoperative wardround
17.30 selection of patients, administration and documentation
18.30 end of the day

**Day 11**

**Thursday 27.10**

07.00 preparations for the day
08.00 recap of previous day
08.30 classroom lectures by dr kabiru abubakar
j spinal anesthesia
09.00 wardround
09.30 surgery with step-by-step teaching
370 + 371 ps-like repair of “inoperable” type IIAb fistula with state-of-the-art anorectum + sphincter ani + perineal body reconstruction in para I (0 alive) who had postpartum fournier gangrene of L vulva resulting in posterior labia loss L
372 clinical lecture + repeat step-by-step demonstration of internal sphincter + external sphincter + perineal body reconstructive surgery in para II (all alive) operated 4x
373 stone removal by vaginal cystostomy thru fistula and then repair with bilateral fascia fixation for second obstetric type IIb fistula with 2 bladder stones in para V (0 alive) who had successful repair in babbar ruga 15 years ago post delivery
374 transverse repair of small type IIa fistula as early closure in para III (2 alive) leaking 63 days
375 circumferential repair by end-to-end vesicourethrostomy with bilateral fascia refixation for type IIAb fistula in para I (0 alive) after catheter treatment failed
376 urethra reconstruction for total post IIAb intrinsic stress incontinence whereby euo posteriorly drawn inside in para I (0 alive)
16.30 postoperative wardround
17.00 selection of patients, administration and documentation
19.00 end of the day

day 12
friday 28.10
07.00 preparations for the day
08.00 recap of previous day
08.15 classroom lectures
k immediate management and mass campaign by catheter
l prevention of post IIa repair incontinence
m extensive obstetric trauma
09.00 wardround
09.30 surgery with step-by-step teaching
377 + 378 clinical lecture + step-by-step state-of-the-art circumferential repair by end-to-end vesicourethrostomy with bilateral fascia refixation and then clinical lecture + step-by-step state-of-the-art anorectum + sphincter ani + perineal body reconstruction in para III (0 alive) as early closure at 43 days; immediate perineum suturing pp
379 transverse repair with bilateral fascia refixation of type IIAb fistula in para I (alive)
13.00 break
16.00 closing ceremony of the whole training programme as organized by fmoh with the attendance of the senior special advisor to the president on mdg with the first lady of katsina state as guest of honour; also present the wife of the deputy governor of katsina state, the commissioner for health, the permanent secretary of health and the permanent secretary of mdg katsina; and the national vvf-coordinator with the desk officer on vvf from fmoh
18.30 tour of the center with commissioning of the new wards, ambulances, generators etc as built/donated by mdg katsina
19.00 end of the day

day 13
saturday 29.10
07.00 preparations for the day
08.00 training continued since we have 3 trainees from ilorin, kwara state, where a new center will be established and 1 international trainee from germany; as well to operate the patients not yet attended to
08.30 wardround
09.00 surgery with step-by-step teaching
  380 clinical lecture and state-of the-art longitudinal reconstruction of pc fascia in large cystocele in para VII (5 alive); all due to obstetric trauma
  381 longitudinal ps-like avw closure of “inoperable” ragged type IIa tah-cs fistula in para XI (8 alive); both ureters identified but cannot be catheterized
  382 on special request from patient fixation of 3° cervix prolapse after 8 operations in para I (0 alive) after sth-cs; the stress incontinence does not bother her since she is still living with husband on same compound
  383 transverse fibrotic fascia repair + highly complicated closure of mutilated third obstetric type IIa fistula in para XI (0 alive) after removal of impacted 8x6x5 bladder stone as first stage
16.00 postoperative wardround
16.30 selection of patients, administration and documentation
19.00 end of working day

day 14
sunday 30.10
08.30 wardround
09.00 surgery
  384 repair of residual fistula with total post IIBb intrinsic stress incontinence as last resort for second/third obstetric leaking in para III (0 alive) following multiple repars
11.00 chief surgeon + team travelled 450 km to sokoto for another workshop
17.15 arrival at hotel and end of working day

sincerely yours,

kees waaldijk MD PhD
chief consultant surgeon trainer

7th of november 2011
**Participants**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Location</th>
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<tbody>
<tr>
<td>Dr. Abubakar Habibu</td>
<td>PMO</td>
<td>FMC Nguru</td>
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<tr>
<td>Alh. Hassan Z. Tagali</td>
<td>CNO</td>
<td>FMC Nguru</td>
</tr>
<tr>
<td>Mrs. Yemisi E. Ojo</td>
<td>CNO</td>
<td>FMC Nguru</td>
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<tr>
<td>Dr. Zubairu Saad</td>
<td>PMO</td>
<td>B/Kebbi</td>
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<tr>
<td>Dr. Owodunni A. Adebola</td>
<td>Consultant</td>
<td>FMC Gusau</td>
</tr>
<tr>
<td>Dr. Okusanya Babasola</td>
<td>Consultant</td>
<td>FMC Katsina</td>
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<tr>
<td>Mrs. Ewana O. Sarkin Noma</td>
<td>CNO</td>
<td>Gen Hosp  Keffi</td>
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<td>Hajiya Saadiya Muhammad</td>
<td>CNO</td>
<td>FMC Katsina</td>
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<td>Alh. Balarabe Ayuba Samaila</td>
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<td>FMC Gusau</td>
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<tr>
<td>Hajiya Muslimat Tayin Ibrahim</td>
<td>CNO</td>
<td>FMC B/Kebbi</td>
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**Trainers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Dr. Kabiru Abubakar</td>
<td>Consultant</td>
<td>Kano</td>
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<tr>
<td>Dr. Idris A. Halliru</td>
<td>MOH</td>
<td>Katsina</td>
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**Facilitators pre-, intra- and post-operative care**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Dr. Abdulmajid Mudasir</td>
<td>CMD</td>
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<tr>
<td>Alh. Abdullahi Haruna</td>
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<td>Babbar Ruga Hospital</td>
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<tr>
<td>Alh. Kabir K. Lawal</td>
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<td>Babbar Ruga Hospital</td>
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<td>Alh. Gambo Lawal</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
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<tr>
<td>Hajiya Adetutu Ajagun</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
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<tr>
<td>Hajiya Amina Mamman</td>
<td>CNO</td>
<td>Babbar Ruga Hospital</td>
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**Chief Trainer**

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<th>Name</th>
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<tbody>
<tr>
<td>Dr. Kees Waaldijk MD PhD</td>
<td>Chief Consultant Surgeon</td>
<td>Babbar Ruga Hospital</td>
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Executive Summary

The service depends on several (in)experienced teams from different organizations visiting and operating without any coordination/philosophy which is not optimal for a good functioning.

On request by the staff, from time to time we visit this important center to sort out things.

However, any trip we have to balance the risks of traveling on dangerous roads, the costs, the efforts and the time spent against the benefits of curing the obstetric fistula patients.

A total of 21 procedures were performed in 21 patients.

When we left there were still many patients left on the long waiting list in this fistularium; the longer patients stay the more difficult it becomes to rehabilitate them into taking responsibility for their own lives instead of depending upon others.

The major problem is that the political will of all the stake-holders involved is missing; there is need for a clear strategy.

It is beyond our power and our philosophy to interfere since we are professionals who face already many difficulties in the execution of our reconstructive surgery; we simply do not have time/energy left for anything else.

It is team work combined with compassion that counts.

We need the government, major aid organizations, politicians and others to create the proper conditions so that we can do our professional job to the best of our knowledge, skills and conscience in order to establish a sustainable service.
**vvf workhosp maryam abacha hospital**  
**sokoto**

**day-to-day report**  
29th of october thru 5th of november 2011

**sunday 29th** of October 2011  
we left katsina at around 11.00 hr and after some 450 km by toyota jeep we arrived safely in sokoto at around 16.30 hr where we checked into the hotel; we had to make several full stops to avoid head-on collision with on-coming cars on the wrong side of the road

**monday 30th** of october 2011  
we proceeded to maryam abacha women and children hospital in sokoto, the venue of the activities, at around 8.00 hr and waited to start working  
however, we were told that they were in the process of organizing the operating theater, consumables etc etc  
at around 14.00 hr when it became clear nothing would work we left after we were promised we could work the following day

**tuesday 1st** of november 2011  
**four procedures:** 4/5 circumferential repair + pcf refixation of type IIAb fistula in para II (1 alive), circumferential bladder fixation of type IIb with anorectum/sphincter ani reconstruction of type IIb rvf in para I (0 alive) with healed four-nier gangrene of labia/vulva, proximal fascia rhaphy + pcf fixation + fasciocol posuspension of female epispadias with 2° cervix prolapse and wardround

**wednesday 2nd** of november 2011  
**six procedures:** circumferential repair + pcf refixation of type IIAb fistula in para I (0 alive), bilateral ureter catheterization + transverse repair under some tension of type IIAb fistula in para I (0 alive), transverse repair + pcf refixation of mutilated type IIb fistula in para I (0 alive) operated 3x, assessment of “inoperable” type IIb fistula operated 3x, longitudinal vcvf repair of type I cs fistula, transverse fascia repair/fixation of total genuine (post IIAb) grade III in trinsic incontinence in para VII (3 alive) with severe obesity and wardround

**thursday 3rd** of november 2011  
**six procedures:** urethralization by longitudinal fascia repair of total genuine in trinsic incontinence grade III in par I (0 alive), euo-rhaphy + para-euo fixation of total post IIb (yankan gishiri) intrinsic incontinence grade III, complicated primary suturing of mutilated type IIAb in para I (0 alive), excision of anterior cervix elongation with bladder/cervix adapation of minute type I fistula in para V (2 alive), catheter treatment of necrotic type I fistula in para II (1 alive) and catheter treatment of necrotic type IIa fistula in para I (alive) and wardround
Friday 4th of November 2011

**Five Procedures:**
- Transverse repair + PCF repair of type II Aa fistula in para III (0 alive) as early closure, ureter catheterization + 4/5 circumferential repair + PCF refixation of type II Ab fistula in para I (0 alive), stone removal per fistulam as first stage of type II Ab fistula in para I (alive), minimum-surgery 4/5 circumferential repair + PCF refixation of type II Ab fistula as early closure in para II (0 alive), transverse repair + PCF fixation of type II Ab fistula in para I (0 alive) and wardround from 8.00 to 16.00 hr.

Saturday 5th of November 2011

8.00 hr up to the maishai and then traveling same 450 km back to Katsina where we arrived safely at around 15.00 hr. 

**Remarks**
We will continue to come to this center since there are many patients in need of our service.

**Time Spent**
A total of 39 hours on the workshop and 14 hours on travelling during 6 full days.

**Conclusion**
It was a fine workshop where 19 operations and 2 catheter treatment were performed in 20 patients.

Kees Waaldijk, MD PhD
Chief Consultant Fistula Surgeon

7th of November 2011

Many thanks to
- The sponsors
  - Waha-International
  - Sokoto State Government
- All the staff of the Maryam Abacha Hospital for their continuing support.
fifth vvf workshop for yobe state

federal medical center

nguru

22nd thru 26th of november 2011

executive summary

since the volatile and violent situation in the north-eastern part of the country had not (yet) reached this area of yobe state we felt safe to travel to nguru

this workshop was the fifth in a series of more in order to establish a functioning vvf-repair service for yobe state; all in line with the national vvf masterplan that each state should have its own vvf-repair center to bring the service towards the patients

the workshop itself was fine where a total of 18 state-of-the-art operations were performed in 17 patients

we were not able to attend to all the patients; so when we left there were still patients on the waiting list
fifth vvf workshop for yobe state
federal medical center nguru
22nd thru 26th of november 2011
day-to-day report

introduction
we returned to nguru to collaborate in order to set up a regular vvf service; all in line
with the national vvf masterplan that each state should have its own vvf-repair center

day-to-day report of the workshop
tuesday 22nd november 2011
travelling from Kano to Nguru, having performed 2 repairs in laure fistula center in Kano, some 250 km

wednesday 23th november 2011
surgery five procedures: complicated continent urethra/fascia/avw reconstruction of type IIb fistula in para I (0 alive), transverse repair of strange type I fistula in para I (0 alive) operated 1x, urethra closure/reconstruction of type IIb yankan gishiri fistula bco amenorrhoea, excision of scar tissue and transverse repair of minute type IIa fistula in para I (alive) operated 1x, and uvvf repair + kwaskarima of mutilated type IIb fistula in para I (0 alive) operated 2x,

wardround from 8.00 to 18.00 hr

thursday 24th november 2011
surgery seven procedures: paraurethra_euo pcf fixation as last resort of "inoperable" post extensive IIb intrinsic incontinence in para II (1 alive) operated 4x, transverse repair + fascia fixation of strange type IIb fistula in para I (0 alive), urethralization by longitudinal fascia repair of total genuine intrinsic incontinence grade III in para I (alive), transverse repair + pcf refixation of type IIb fistula in para I (0 alive) operated 2x, continent urethra/fascia/avw reconstruction of type IIb yankan gishiri fistula, and transverse repair of type IIb fistula combined with repair of type I rvf in para VII (1 alive) operated 4x

wardround from 8.00 to 18.30 hr
friday 25th november 2011

surgery

six procedures: longitudinal repair of type I fistula in para VII (6 alive), mini mum-surgery repair of type IIAb fistula with severe obesity in para I (0 alive) leaking 28 yr and operated 2x, circumferential repair of type IIAb fistula as first stage of multiple fistulas in para IX (4 alive), transverse repair of type IIJa urethrovesicocervicovaginal fistula in para VII (6 alive) operated 2x, transverse repair + pcf fixation of type IIJa fistula leaking for 50 yr and operated 1x, and “continent urethra/avw reconstruction” of severely mutilated type IIIBb fistula in para I (0 alive) operated 1x

wardround from 8.00 to 18.30

saturday 26th of may 2011

after the wardround we proceeded on our trip back directly to katsina over some 400 km where we arrived safely at 15.30 hr mun gode Allah

a total of 25 hours were spent during this workshop on surgery and wardrounds and another 12 hours on traveling during a full 4 days

conclusion

it was a fine workshop as fifth step to have a functioning vvf center in yobe state where a total of 18 state-of-the-art operations were performed in 17 patients

however, before we return here we must wait for complete resolution of the volatile and violent political situation in the north-eastern part of the country

kees waaldijk MD PhD chief consultant fistula surgeon 30th of november 2011

many thanks to:
the sponsors
waha-international
federal ministry of health
dr bala, dr mohammed b kawuwa, alhaji hassan z tagali and mrs yemisi e ojo for their dedication/commitment/organization and to the management and all the staff of federal medical center nguru for their support
origin obturator internus + piriformis muscle
Babbar Ruga National Fistula Teaching Hospital
Katsina State

report on VVF/RVF repairs
1984-2011

VVF-repairs: 12,252
RVF-repairs: 1,518

total 13,770 repairs

there are three main services within the hospital as obstetric fistula center, referral center for leprosy and referral center for tuberculosis with a very fine hostel annex rehabilitation center just opposite the hospital

under mdg funding four new high-quality wards have been built and two big generators installed

both the Ministry of Health and the Ministry of Women Affairs and Social Welfare are highly committed, as is the Governor himself; we are very grateful to the First Lady of the state for her deep compassionate concern

three intensive training workshops were executed with excellent results under fmoh/mdg/unfpa funding

since started from scrap in January 1984 it has become an important comprehensive obstetric fistula repair, (inter)national training, research and rehabilitation center with good infrastructure and continues to be instrumental in giving thousands of destitute patients a second chance in life; further development is planned

at the 54th national health council of Nigeria babbar ruga hospital was nominated as the national vvf hospital for repair, training, research and documentation

also some fistula surgery is being performed in Funtua General Hospital, Katsina Maternity Hospital, Daura General Hospital, Kankiya General Hospital and Malumfashi Hospital; all the doctors have been trained within the National VVF Project

some 30% of the patients come from neighbouring République du Niger

more staff, doctors and nurses, from Katsina State have to be trained

surgeons: dr yusha’u armiya’u, dr shehu bala, dr halliru idris, dr jabir mohammed, dr aminu safana, dr isah shafi’i, dr abdurasheed yusuf, dr moses i sunday-adeoye, dr awal sani, dr abdulmajid, dr kabiru abubakar, dr imam amir, dr said ahmad, chief consultant and others
Laure Fistula Center
Murtala Muhammad Specialist Hospital
KANO
Kano State

report on VVF/RVF repairs
1990-2011

VVF-repairs: 8,606
RVF-repairs: 1,139

**total 9,745 repairs**

the obstetric fistula service within Kano State should be a [model](#) for the other states since the rehabilitation center annex hostel is outside but near the hospital and managed by the Ministry of Social Welfare; so there is no conflict of interest; the cooperation is fine

both the Ministry of Health and the Ministry of Women Affairs and Social Welfare are highly committed

two intensive training workshops were executed during the year with excellent results under fmoh/mdg/unfpa

it is an excellent place for training nurses and other health personnel, and plays a major role in the training of doctors

although obstetric services are free of charge in the state the system is not functioning, not even in the capital since the majority, some 70%, of our new patients come from within Kano municipality and 30% have even delivered in the same hospital

quite a number of VVF-repairs are performed in Danbatta VVF-Center, Aminu Kano Teaching Hospital, Sheikh Jiddah Hospital, Wudil General Hospital and other hospitals; all the doctors have been trained within the National VVF Project

dr imam amir with over 4,000 repairs is the fistula surgeon i/c

more staff, doctors and nurses, from Kano State have to be trained

surgeons: dr imam amir, dr said ahmed, dr zubairu iliyasu, dr kabiru abubakar, dr idris abubakar, dr hauwa abdullahi, dr muktar hamza, dr habib gabari, dr hadiza galadanci, dr halliru idris. dr abdulrasheed yusuf, dr umaru dikko, chief consultant and others
Fistula Units

B_KUDU, HADEJIA and JA\HUN

Jigawa State

report on VVF/RVF repairs

1996-2011

this is mostly the work of dr said ahmed who is involved in the VVF/RVF-repair since 1991; though he left the government service he is still deeply involved

VVF-repairs: 3,080

RVF-repairs: 171

total 3,251 repairs

there has been a complete revival of fistula surgery in jahun general hospital since msf france took a serious interest in this place since 2008/09

dr said ahmed and dr kabiru abubakar are the professional motors of the revival; operating during the weekends upon large numbers of patients

two doctors and one nurse were trained, but the problem with msf is the high turnover of staff

though dr kabiru abubakar has left for belarus in order to become a consultant surgeon; during his leave he is still operating upon large number of patients

there are many obstetric fistula patients in jigawa state; if not for msf this center would not be functioning at all

definitely, it needs more commitment of the authorities

nb dr said ahmed is by far the most experienced indigenous Nigerian fistula surgeon with over 6,000 repairs

surgeons: dr said ahmed, dr kabir abubakar, dr isah adamu, dr imam amir, dr salisu babura, dr sunday lengmang, dr sunday-adeoye, chief consultant and others
Maryama Abacha Women and Children Hospital

SOKOTO

Sokoto State

report on VVF/RVF repairs

1994-2011

VVF-repairs: 2,870
RVF-repairs: 197

total 3,067 repairs

it is a very important center with good facilities and a high-quality service where many patients present for surgery; it needs further development with regards to manpower in order to perform the 300-400 repairs a year needed

the hospital is under authority of the Ministry of Women Affairs whilst the staff comes under the Ministry of Health

though we have been lobbying hard for many years somewhere along the line we cannot get a grip on this center; partially due to political manoeuvring of the major organizations

dr ibrahim nakaka makes an effort to perform the simple repairs

some of the patients were operated in uduth during a workshop in the urologic department

the negative effect of interfering with this center by .. and unfpa and engender health .. is noted any time we come here; with invasion of this center by engender health in 2007, however not to the benefit of the patients

still, we would like to move forward to develop this center further not only into a major repair center but also into a training center; for this a clear plan of action with reliable commitments of all parties involved is needed

the team from babbar ruga hospital makes a major effort (550 km from katsina) to come “regularly” for 5-day workshops of surgery

more staff, many doctors and many nurses, have to be trained

surgeons: dr nakaka ibrahim, dr abdullahi gada, dr zubairu iliyasu, dr bello tsafe, dr abdulrasheed yusuf, dr halliru idris, dr abdulkarim garba mairiga, dr idris abubakar, dr paul hilton, dr abba wali, dr bello lawal and chief consultant and others
Special Fistula Center

B_KEBBI

Kebbi State

report on VVF/RVF repairs

1996-2011

VVF-repairs: 1,874
RVF-repairs: 65
total 1,939 repairs

there is a large backlog in Kebbi State especially of patients with highly complicated fistulas who have been operated several times

dr dantani lantana has left the center to specialize; and dr hassan wara and dr al moustapha come on irregular base

the hospital is run under the Ministry of Women Affairs whilst the staff comes under the Ministry of Health

the facilities are alright but there is need for a high-quality operating table and good operation lights; otherwise the very difficult repairs cannot be performed

also needed is a rehabilitation unit annex hostel to provide a comprehensive obstetric fistula service for the state

the team from Babbar Ruga Hospital makes a major effort (700 km from Katsina) to come for 3-4 day surgery workshops of the complicated fistulas;

since 2005 unfpa is interfering in a negative way with the functioning of the center

definitely, more staff, doctors and nurses, have to be (re)trained

in principle, this hospital has all the potential to become a major repair center; but it seems things have come to a standstill

what is needed is a clear plan of action with commitments of all parties involved to move things forward and ensure a sustainable vvf-repair service

fistula surgeons: dr dantani lantani, dr hassan wara, dr lawal al moustapha, dr oladapu shittu, prof oladosu ojengbede and chief consultant
Kofan Gayan Hospital

ZARIA

Kaduna State

report on VVF/RVF repairs

1998-2011

VVF-repairs: 1,014
RVF-repairs: 83

total 1,097 repairs

to my knowledge this hospital is the only center in the world with a successful holistic approach

all patients are offered rehabilitation (family care)

systematically a selective caesarean section is offered and performed in subsequent deliveries; for this patients are admitted 2 weeks before expected date of delivery; so 20-25% of all the patients have delivered a live infant in this center following a successful repair

and there are zero outcasts amongst the more than 1,000 patients treated so far; even the 6 incurable patients take care of their own lives and have been reintegrated into society since they were provided with skills and means (sewing machine; grinding machine etc); this is real rehabilitation

for this, hajiya aisha ahmed and dr ado zakari have to be praised, together with all the staff for their dedication and commitment

the chief medical director of the hospital dr muazu had obstetric fistula training in order to ensure good understanding of the problem and good cooperation; under heineken africa foundation

dr lawal khalid, consultant urologist from abuth, is performing ureter re-implantations in all patients we refer to him; with excellent results

in principle the team from babbar ruga hospital comes once every 2-4 weeks to perform the “difficult” surgery and for on the job training; only the very difficult surgery is referred to katsina; distance from katsina 250 km and via kano 400 km

it is only a matter of time before the major organizations will descend upon this center like vultures to claim these achievements as their own

surgeons: dr ado zakarai, dr halliru idris, dr abdulrasheed yusuf, dr joel adze, dr julius gajere, dr husaina adamu, dr lawal khalid and chief consultant
Faridat Yakubu VVF Hospital

GUSAU

Zamfara State

report on VVF/RVF repairs

1998-2011

| VVF-repairs:     | 1,113 |
| RVF-repairs:     | 39    |
| **total**        | **1,152 repairs** |

the existing general hospital has become a federal center and then this hospital has become a general hospital; this is a setback for the obstetric fistula surgery

dr sa’ad idris performs most of the fistula operations

however; after serving his term as the commissioner for health he left the state

there is no plan of action to move things forward

the chief consultant and team used to come here on a regular base for the surgery but due to organizational problems this is no longer possible; though we are willing to return here if the need should arise

surgeons: dr sa’ad idris, dr halliru idris, dr abdulrasheed yusuf, dr imam amir and chief consultant and others
Southeast National Fistula Hospital  
ABAKALIKI  

**report on VVF/RVF repairs**  
**2002-2011**  

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>VVF-repairs</td>
<td>914</td>
</tr>
<tr>
<td>RVF-repairs</td>
<td>68</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>982 repairs</strong></td>
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</tbody>
</table>

This center is one of the two national fistula hospitals in Nigeria. Dr. Moses I. Sunday-Adeoye is the driving force; right from the beginning up till now; and I am sure Dr. Sunday will write his own far more extensive report.

There is high commitment by the federal government, Ebonyi state government, the first lady of the state, UNFPA, and USAID-Acquire.

For the time being this center seems to depend upon workshops by different visiting consultants with their teams.

Four training workshops were executed under FMoH/MDG/UNFPA funding.

There are many patients to demonstrate the fact that the obstetric fistula is all over Nigeria and not restricted to certain areas.

To move things forward, and the need is certainly there, far more staff, doctors and nurses, have to be trained in order to care for the **many patients in the southeast**.

Surgeons: Dr. Moses I. Sunday-Adeoye, Dr. Sa’ad Idris, Dr. Imam Amir, Dr. Sunday Lengmang, Prof Oladosu Ojengbede, Dr. Hassan Wara; Dr. Oladapu Shittu, once in a while chief consultant and others.
Federal Medical Center
nguru
Yobe State

report on VVF/RVF repairs
2008-2011

VVF-repairs: 123
RVF-repairs: 14

total 137 repairs

this service was started in 2008 on special request by dr mohammed kawuwa, chief medical director, who had attended one of our training programs

however, this is only possible by surgical workshops

the perioperative nurse and pre/postoperative matron had been trained some years ago; these two nurses came for an advanced training course in katsina as sponsored by federal ministry of health/mdg whilst 1 doctor came for training

so far, 6 workshops have been executed with excellent evidence-based results

we are all so impressed by the dedication and commitment of all the staff and by the results that we are looking forward eagerly towards our next workshop

in principle we are aiming at 2-3 workshops a year

unfortunately the violent and volatile situation in the state is exploding

surgeons: dr mohammed kawuwa, dr a a kullima, dr kabir abubakar, chief consultant and others
Hopital National /Centre Hospitalier/Maternité Centrale
Départemental/Materité Tassigui

ZINDER/NIAMEY/MARADI/TAHOUA

République du Niger

report on VVF/RVF repairs

1996-2011

VVF-repairs: 1,657
RVF-repairs: 104

total 1,761 repairs

the obstetric fistula service in zinder is functioning well under the direction of dr lucien djangnikpo; the new vvf center has been constructed but it needs equipment
due to logistic problems the team from babbar ruga hospital could only visit this center once (275 km from katsina)
prof sanda with his long-standing experience in the obstetric fistula surgery is firmly in charge of the vvf-service in hôpital national in niamey
we trained 2 doctors from maradi and executed a training workshop in maradi where 4 doctors attended
both governments of nigeria and niger are committed to continue the south-south cooperation

surgeons: dr lucien djangnikpo, dr akpaki faustin, dr halliru idris, dr tijjani mamman hina, dr abdoullahi idrissa, dr moustapha diallo, dr madeleine garba and chief consultant and others