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The Brikama Obstetric Project

DESCRIPTION AND INTERIM ANALYSIS

INCLUDES JANUARY 1ST TO END JUNE2016

The Plan

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Background to the Brikama Obstetric Project

Describe

- Advanced Obstetric Training Programme
- Health System Strengthening

Report: Interim Analysis

- Maternal Mortality
- Management of Life Threatening Emergencies
- Measuring Provision of CEmOC
- Educational Attainments of the Obstetric Trainees

Summary

MCAI and The Gambia

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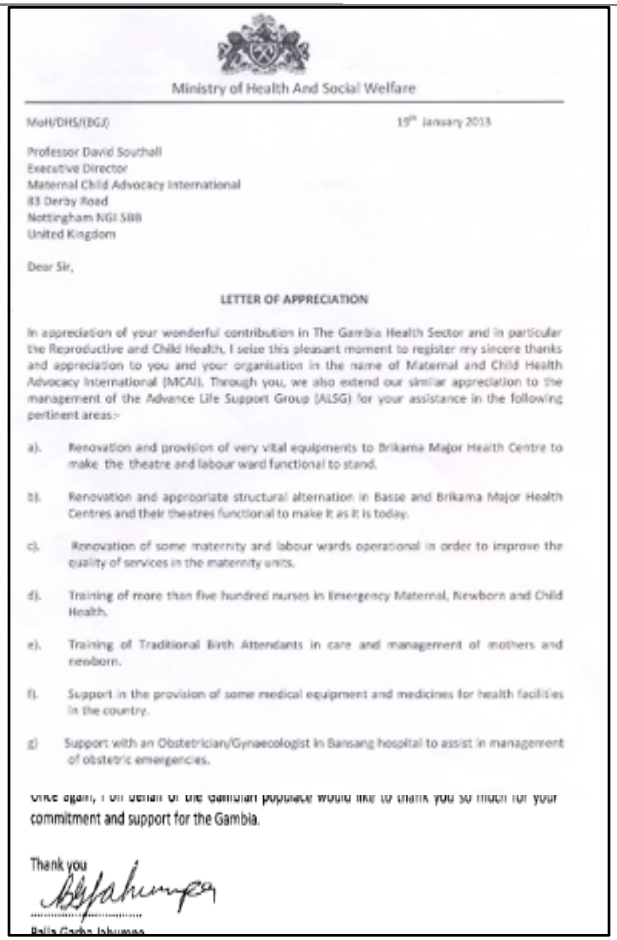
- Small International medical charity
- Hospital obs/neonatal/paed emergencies
- 11 years experience in The Gambia
- Strengthening Emergency Care
  - Partnership with Ministry of Health
  - Delivery with Traditional Birth Attendants
  - Emergency Maternal and Neonatal Health Course (EMNH)
    - 3 day short courses
    - 800+ Doctors, Nurses, Community health assistants
    - In country faculty who train others overseas
    - Partnership with ALSG
- Development of Infrastructure



Ministry of Health And Social Welfare

MoH/DHS/(BGJ) 19th January 2013

Professor David Southall
Executive Director
Maternal Child Advocacy International
83 Derby Road
Nottingham NG1 5BB
United Kingdom

Dear Sir,

LETTER OF APPRECIATION

In appreciation of your wonderful contribution in The Gambia Health Sector and in particular the Reproductive and Child Health, I seize this pleasant moment to register my sincere thanks and appreciation to you and your organisation in the name of Maternal and Child Health Advocacy International (MCAI). Through you, we also extend our similar appreciation to the management of the Advance Life Support Group (ALSG) for your assistance in the following pertinent areas:-

a). Renovation and provision of very vital equipments to Brikama Major Health Centre to make the theatre and labour ward functional to stand.

b). Renovation and appropriate structural alternation in Basse and Brikama Major Health Centres and their theatres functional to make it as it is today.

c). Renovation of some maternity and labour wards operational in order to improve the quality of services in the maternity units.

d). Training of more than five hundred nurses in Emergency Maternal, Newborn and Child Health.

e). Training of Traditional Birth Attendants in care and management of mothers and newborn.

f). Support in the provision of some medical equipment and medicines for health facilities in the country.

g) Support with an Obstetrician/Gynaecologist in Bansang hospital to assist in management of obstetric emergencies.

Once again, I on behalf of the Gambian populace would like to thank you so much for your commitment and support for the Gambia.

Thank you

Baba Gaoba Jahumpa

Improving skills in obstetrics

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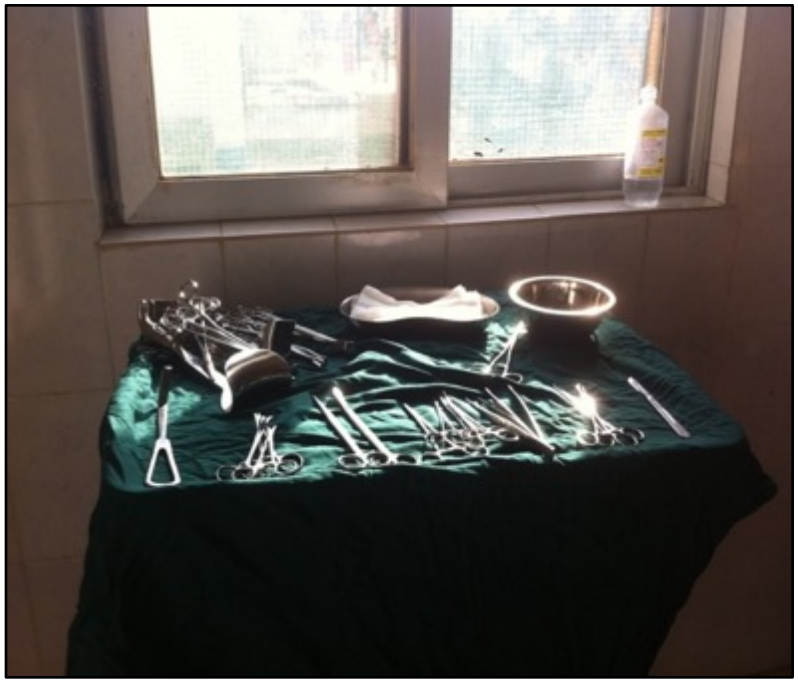

- Advanced Obstetric training Programme
- Pilot Project
- Agreement with Minister of Health
- Partnership
  - Ministry of Health
  - UNFPA
  - World Health Organisation
- Financial support
  - Soroptomist International
  - ALSG
  - MCAI funds

Advanced Obstetric Training Programme

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ONE YEAR COMPETENCY BASED APPRENTICESHIP STYLE TRAINING

Assessment:

- OSCE
- Logbook
- Work based assessments
- Written Assessment

Management component including

- Writing clinical guidelines
- Audit
- Root cause analysis/Maternal Death Surveillance and Review

Detailed Curriculum

1. Anatomy and Basic Surgical Skills
2. Human Physiology and Physiological Adaptations in Pregnancy
3. Antenatal Care
4. Maternal Medicine
5. Management of Early Pregnancy Complications
6. Clinical Management Labour and Delivery and their complications
7. Organisation and management of the labour ward
8. Postpartum Management (Including Post-operative care)
9. Ethics and professional standards
10. Laboratory and Blood Transfusion

Apprenticeship based clinical training

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Clinical areas:

- Labour ward
- Maternity ward
- Antenatal Clinic & Ultrasound Service
- Maternity triage
- Operating theatre

Advanced Obstetric Trainees

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- 2 trainees in Year 1
  - Post internship junior doctor
  - Senior midwife
- 4 Trainees in Year 2
  - 3 post internship junior doctors
  - 1 Senior Midwife
- All: advanced obstetrics
- Doctors only: abdominal surgical skills including Caesarean section

Health System Strengthening

UPGRADING BRIKAMA MHC TO A COMPREHENSIVE EMERGENCY OBSTETRIC CARE TRAINING FACILITY

Brikama
Major Health Centre

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At onset of project August 2014

- 5000+ deliveries/year
- Staffing each shift:
  - 2 midwives
  - 1 care assistant
- 1 Cuban obstetrician
- Operating theatre renovated and equipped by MCAI but not functioning

Sub-optimal Training Environment

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- Chaotic and unhygienic
- Lack of essential supplies such as sutures, spinal needles, catheters
- Lack of essential drugs such as oxytocin, magnesium sulphate, anaesthetic agents, analgesics, IV antibiotics
- No guidelines or patient paperwork
- Non functioning operating theatre

BUT STAFF:

- Recognized problems
- Were keen to change practice

- Labour ward management improved
- Formal Handover: daily and between shifts
- Clinical skills training for all

Paperwork and proformas

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Developed and introduced the following:

- Admission sheets
- Observation charts
- Prescription charts
- Operation notes
- Investigation request forms
- Ultrasound scan report forms
- Discharge and follow-up forms

Guidelines and audit

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6 developed so far including:

- Management of pre-eclampsia and eclampsia
- Induction of labour at term
- Management of prolonged rupture of membranes and peri-partum sepsis
- Antepartum haemorrhage
- Postpartum haemorrhage

Guidelines and audit

MCAI textbook, Obstetric & Neonatal Pocket Books

- Based on WHO guidance and clinical evidence
- Tailored to Low Resource Settings
- 105 senior authors with international experience of low resource hospital care

750 donated and distributed throughout The Gambia by RCH team

Upgrade of sterilisation processes

- Covered instrument sets
- Sterilisation cycle
- Checked and confirmed correct oven temperatures
- High level disinfection
- Process for maintenance

Improved staffing levels

1 senior MCAI obstetrician

6 MCAI Trainees

1 senior Gambian surgeon

2 nurse anaesthetists

6 perioperative nurses

5 ward nurses

3 theatre orderlies

On call arrangements

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1. First on call resident overnight: (1 in 4)
   3 doctors and 1 midwife trainees
2. Second on call: resident overnight (1 in 4)
   2 senior trainees
   1 senior Gambian surgeon undertaking obstetric training
   1 Cuban obstetrician (no third on call cover)
3. Third on call: non-resident overnight (2 in 3)
   Senior obstetrician (currently international)
   - Telephone advice including decisions re: induction/caesarian section
   - Attends for surgery when advanced midwife is on call/potentially difficult
   - Attends for emergencies if required

Reliable supplies of essential emergency drugs. Regularly supplemented by MCAI

Opening the operating theatre

From Jan 1st to 31st May each year

41 cases in 2014

119 cases in 2015

210 cases in 2016

Equipment provided
Swab counts ensured
Safe spinal needles provided
Pre-incision antibiotics given
Multimodal analgesia provided

Interim analysis

TO ASSESS THE IMPACT OF THE

BRIKAMA OBSTETRIC PROJECT

Maternal Mortality

Methods

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Period examined

- January 2013 – July 2014: Pre-study control period
- August – December 2014: Introductory Period
- January –December 2015: All components in place to enable training

Data obtained from

- Discussion with maternity staff and public health officers
- Facility death certificate books
- Labour ward mortality book
- Theatre book
- Transfers-out to EFSTH book
- Review of information held on Maternal Mortality cases at EFSTH

Results

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BEFORE PROJECT

2013 – no records kept

2014

- Death certificate book for 5 months
- Labour ward death book

- 6 in facility deaths
- 9 deaths at EFSTH post transfer
  - 2 dead on arrival
  - 3 died soon after arrival
  - 2 died date of transfer

No deaths reported in official returns

DURING PROJECT

2015

- Death certificate book for 12 months
- Labour ward death book

- 8 in facility deaths
- 6 deaths at EFSTH post transfer
  - 0 dead on arrival
  - 0 died soon after arrival
  - 2 died on date of transfer

Maternal deaths Jan 1st to 30th June 2016

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2989 deliveries

Increased operations n = 249 so far (projected increase 83 %)

Reduced referrals to EFSTH: 60% compared with 2015

No within facility deaths relevant to clinical practice

Only 2 deaths to report

The 1st patient died on arrival 2 weeks postnatally. She was attended by a senior doctor when she was carried into the unit but died within five minutes before any intervention was possible.

The 2nd patient had a known, inoperable brain tumour and non viable fetus; she died at home and was brought to the facility.

Management of Life Threatening Emergencies

WHO CLASSIFICATION

Methods

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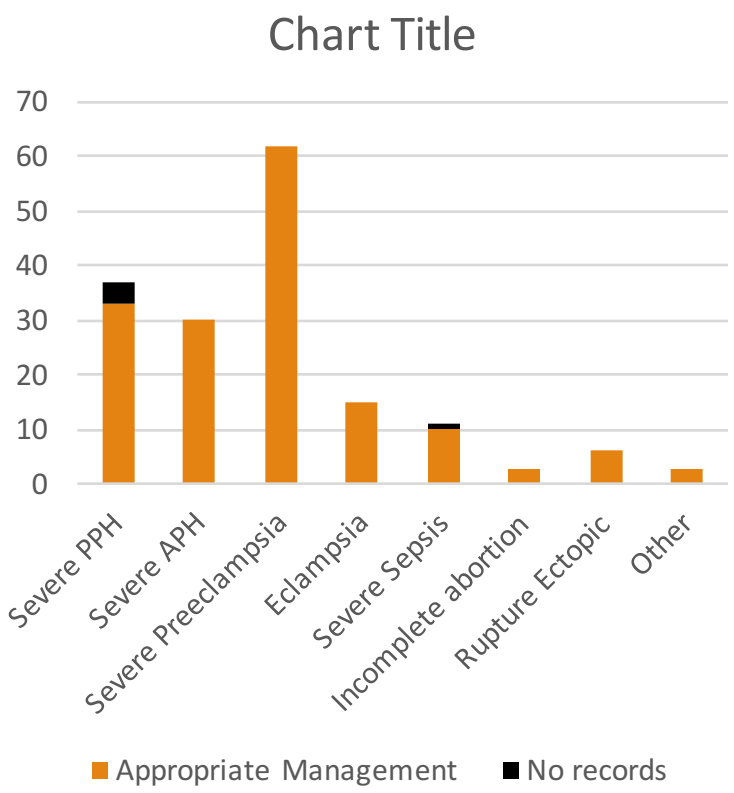
WHO recommended approach

- April –July 2015
- Comprehensive retrospective case note review
- WHO Classification plus antepartum haemorrhage and ectopic pregnancy
- MCAI audit form: WHO recommended data plus case management data

6 Clinical Guidelines

- Eclampsia & Severe Preeclampsia
- Antepartum Haemorrhage
- Postpartum Haemorrhage
- Ruptured Ectopic Pregnancy
- Ruptured Uterus
- Septicaemia

Results



162 Patients near miss cases

All managed appropriately where records available to assess

2 Deaths

- 1 Sepsis at BMHC
- 1 Severe pre-eclampsia at EFSTH

7 Transfers for operating theatre

1 Hysterectomy for ruptured uterus

Care provided by obstetric trainees under supervision

Measuring provision of Comprehensive Emergency Obstetric Care

Operating Theatre

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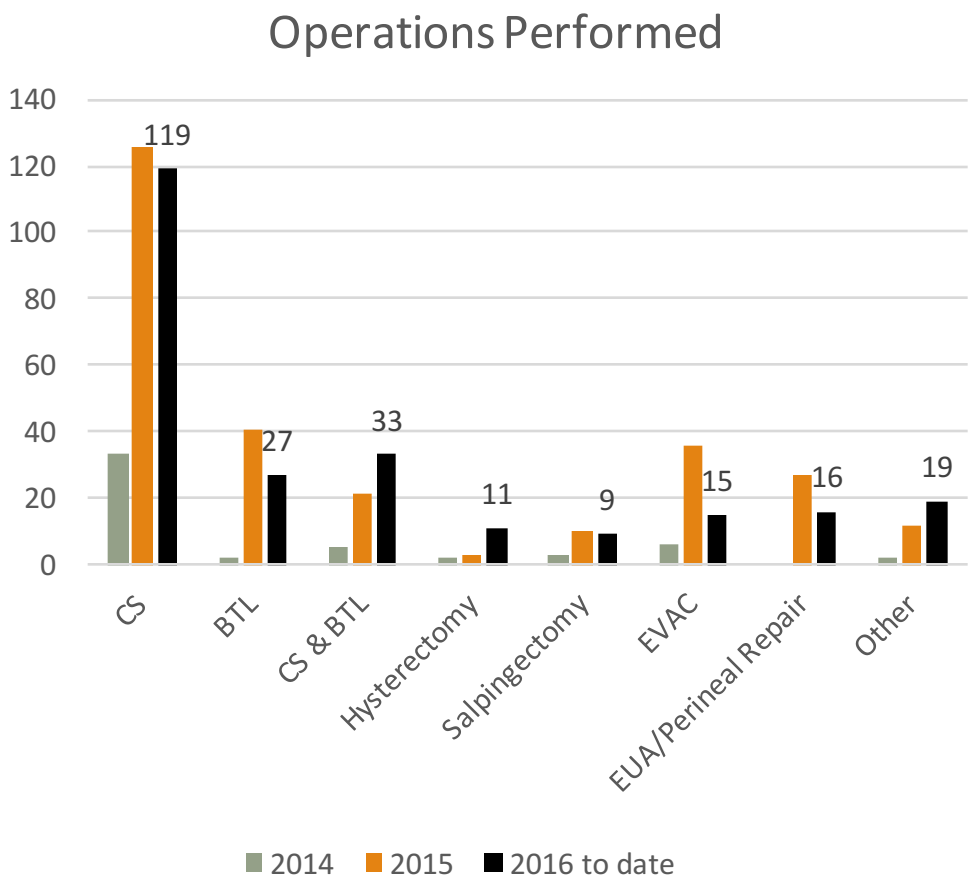

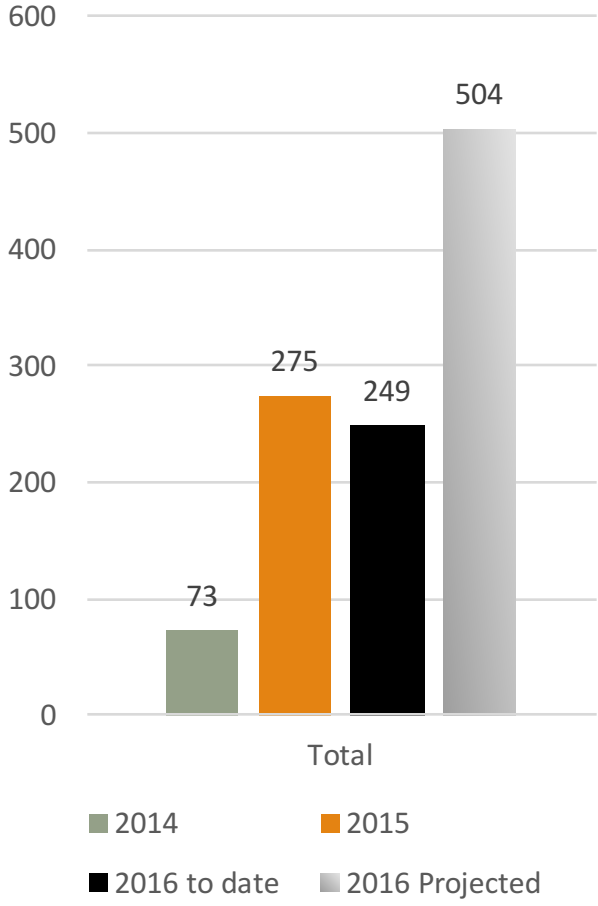

Transfers out to EFSTH

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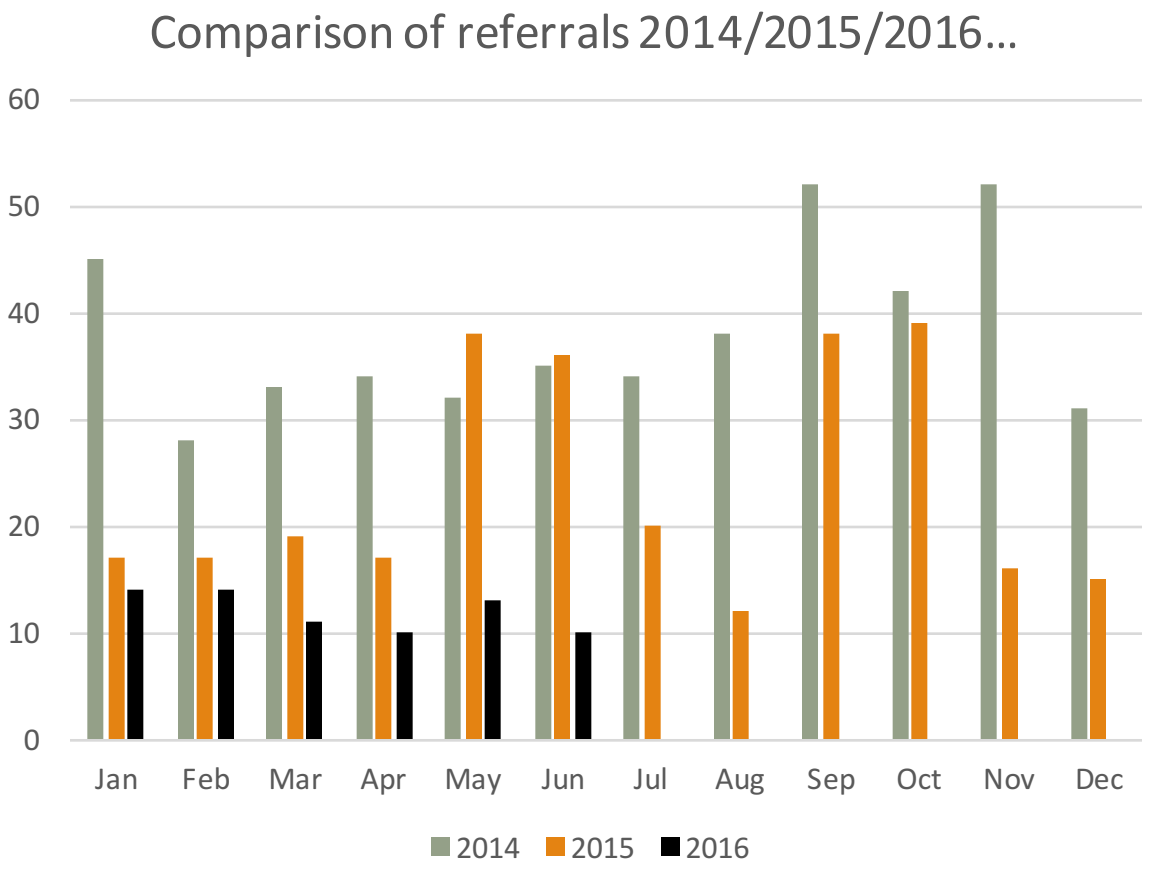

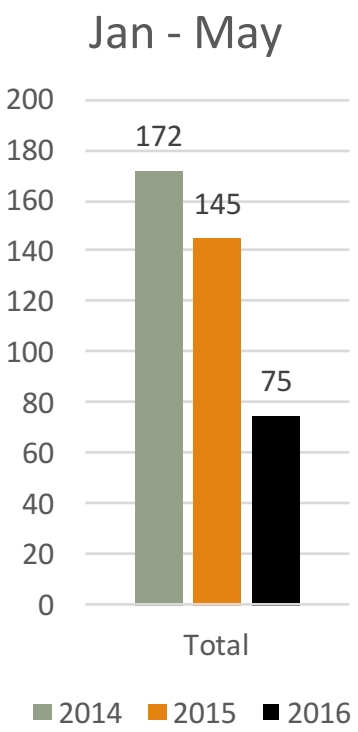

60% decrease

Blood transfusion service

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FRESH BLOOD ON STANDBY

High Risk Patients

- Grand multipara (Para 5 or more)
- Multiple pregnancy
- Previous PPH
- Severe pre-eclampsia/IUFD/abruption/prolonged clotting time
- Hb<9g/dl or moderate to severe conjunctival pallor

- Antenatal Clinic: donor identified
- Labour Ward: X-match requested on arrival for standby

ADMINISTRATION

Fresh blood available if required

Units not used available for emergencies then replaced

- Up to 10 units given per patient
- Reduces transfusion delay and complications

Suitable fridges in lab and on labour ward

In-line blood warming system

Educational attainments of obstetric trainees

Trainees with Dr Gemma Sheridan International Senior Obstetric Trainer

Mr Arfang Faye
Senior midwife

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Procedure	Number
Vacuum Delivery	50
Twin delivery	20
Breech Delivery	29
Shoulder Dystocia	8
Cord prolapse	5
Perineal repair inc2/3/4th degree	74
Condom Tamponade	10
Uterine Evac	52

OSCE Result: 84%

Audit: Induction of Labour with misoprostol

Guideline: Vacuum Delivery

Evidence of curriculum completion

- Case Based Discussions
- Supervisor Observed Experience
- Reflective Practice

Dr Abdul-Hamid Kanteh, Junior doctor

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Procedure	Number
Caesarian section	96
Vacuum Delivery	18
BTL	18 (incomplete)
Ectopic	10
Breech Delivery	15
3rd degree tear	15
Condom Tamponade	7(incomplete)
MROP	5

OSCE Result: 85%

Audit: Management of Severe Preeclampsia and Eclampsia

Guideline: caesarean Section

Evidence of curriculum completion

- Case Based Discussions
- Supervisor Observed Experience
- Reflective Practice

Management of the facility

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- Consistent clinical management as per WHO guidance
- Life-threatening obstetric complications (40/month)
- Care delivered by trainees in large part
- Emergency drugs and equipment consistently available
- Increased use of operating theatre
- Reduction in transfers to EFSTH

Educational attainment

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Trainees

- have achieved all competencies within time frame
- are able to manage complex cases with indirect supervision
- have worked in a unit where systems function consistently at basic level
- will be able to provide CEmOC in another facility if support available for difficult surgery

Overall

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- The Brikama Obstetric Project represents a sustainable way to achieve the UNFPA, WHO, MoHSW goal of providing 24/7 access to CEmOC
- In the future, graduates of the programme could fill the skills void in rural areas
- Senior midwives are able to work in senior clinical roles within a multi disciplinary team and help train doctors
- Multidisciplinary approach to tackling high maternal mortality and skills shortage including task shifting is appropriate.

Future Plans

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Need for the programme to continue for:

- Maintenance of improved standards at Brikama MHC
- Training programme for obstetricians (midwives & doctors)
- Part of a specialist training programme based at EFSTH

Planned improvements to service:

- Antenatal Hypertension clinic to address high IUFD rate
- Mandatory skills and scenario based training for all unit staff
- A basic neonatal service must be established

However

- Funding ends 31st October 2016