Providing Advanced Hospital care for pregnant women and newborn babies in a country with few doctors

Task shifting: experience from Liberia

Maternal and Childhealth Advocacy International MCAI

http://www.mcai.org.uk/liberia
http://books.mcai.org.uk
www.ihpi.org

MCAI | Maternal & Childhealth Advocacy International

About MCAI

- Maternal & Childhealth Advocacy International (MCAI) is a Scottish Charitable Incorporated Organisation (SCIO) with registration number SC043467. MCAI is also registered in Liberia Enterprise Number 051730402 http://www.mcai.org.uk/liberia

- The charitable purposes of MCAI are to advance health by saving and improving the lives of seriously ill pregnant women, children, and babies in hospitals in areas of extreme poverty by empowering and enabling our in-country partners to strengthen emergency healthcare so that every infant, child, and pregnant woman and adolescent can receive high quality emergency healthcare without delay.

Country	Number of persons per 1 doctor	MMR Maternal deaths /100,000 live births	Population (millions)	Annual No: births	No: maternal deaths/year scaled to a population of 5 million
Liberia	71,429	1100	4.503	156,000	1,904
Malawi	52,632	570	17.215	665,000	1,101
UK	356	9	64.716	813,000	6
USA	408	28	321.774	4025,000	18

Why so few doctors in Liberia?

1. armed conflict between 1989 and 2003

2. more than three quarters of doctors trained in Liberia have emigrated. More than three quarters of doctors trained in Liberia are practicing in Western countries http://www.plosmedicine.org/article/info%3Adoi%2F10.1 371%2Fjournal.pmed.1001513

3. 184 health workers in Liberia died from Ebola virus disease in the 2014–2016 outbreak.

According to MOH, only 117 doctors available in the country in February 2015

Main activities of the Liberia programme

- An E-Library of teaching materials on maternal, neonatal and child healthcare including 331 videos and >400 manuals, books, guidelines etc. provided to doctors, nurse anaesthetists, nurses and midwives
- Provided Computer Tablets and Internet modems for trainees and trainers for the Advanced Obstetric training course
- Recruiting international volunteer doctors from well resourced countries to support training
- Distance learning techniques


The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
SIERRA LEONE
GUINEA
CÔTE D'IVOIRE
ATLANTIC OCEAN
LIBERIA
Guéckédou
Mendekoma
Voinjama
Kolahun
Kailahun
Buedu
Pendembu
Vahun
Irié
Zigida
Kenema
Gelahun
LOFA
Yella
Zorzor
Nzérékoré
Yekepa
Saniquellie
Danané
Kongo
Wiesua
Belle Yella
Gbange
Belefuanai
Gahnpa (Ganta)
Kahnple
Bendaja
Sulima
GBARPOLU
Bopolu
Gbarnga
Palala
Kpein
Sagleipie
GRAND CAPE MOUNT
Bo
Tubmanburg
Suakoko
Zienzu
BONG
Yela
NIMBA
Butlo
Robertsport
Lake Piso
Bong Town
Klay
BOMI
Zekera
Kpeaple
Toulépleu
Guiglo
MARGIBI
Kakata
Careysburg
Tapeta
Brewerville
Monrovia
Harbel
Marshall
GRAND BASSA
Gboyi
Tobli
Kola (Kola Town)
Guata
Poabli
Towabli (Towai Town)
Debli
Tchien (Zwedru)
Hartford
Edina
Buchanan
Trade Town
RIVER CESS
Ghapo
Gonglee
Babu
Drubo (Dubwe)
Tai
GRAND GEDEH
Galio
Duabo
Pelokehn
Timbo
Bokoa
River Cess
Shabli
Juazohn
Yakakahn
Yibuke (Kaobli)
Kopo
SINOE
RIVER GEE
Tiehnpo
Fish Town
Sehnkwehn
Greenville
Tatuke
Tawake
Sinoe Bay
Kodeke
Nyaake
Nana Kru
GRAND KRU
Barclayville
Sasstown
Nemeke
Grand Cess
Plibo
Tabou
C. Palmas
Harper
0 20 40 60 80 km
0 10 20 30 40 50 mi
LIBERIA
International boundary
County boundary
National capital
County capital
Town, village
Road
Railroad
Airport

Ministry of Health and Social Welfare
Republic of Liberia

ROAD MAP FOR ACCELERATING THE REDUCTION OF MATERNAL AND NEWBORN MORBIDITY AND MORTALITY IN LIBERIA (2011-2015)

"The Nation Thrives When Mothers Survive;
We Must Strive to Keep them Alive",
-President Ellen Johnson Sirleaf

LAUNCHED MARCH 08, 2011

Training senior midwives in advanced obstetrics including abdominal surgery

Part of the strengthening emergency healthcare system programme for pregnant women and new-born infants in Liberia

WHO Director General

- "There is international consensus that without urgent improvements in the performance of health systems, including significant strengthening of human resources for health, the world will fail to meet the Millennium Development Goals for health……

- More resources are needed. But we must also seek innovative ways of harnessing and focusing both the financial and the human resources that already exist"

Task Shifting

- In its *"optimise maternal and neonatal healthcare recommendations",* WHO encourages Task Shifting as a *"promising strategy for improving access and cost-effectiveness within health systems."*

- *"Access to care may be improved by training and enabling 'mid-level' health workers to perform specific interventions that might otherwise be provided only by cadres with longer (and sometimes more specialized) training."*

Urban areas

- Cities are noisy, over-crowded and sometimes dangerous
- However, they have better schools, hospitals and recreational facilities
- There are also people who can afford to support private practice
- Most doctors and their families want to live there

Rural areas

- Peaceful, often beautiful scenery but lack schools, especially for older children in the family, lack health facilities especially hospitals
- Pregnant women and adolescents have to travel long distances to access EmONC
- Lack restaurants, cinemas, theatres, etc.
- Lack private practice

Many doctors and their families do not wish to live outside main cities

African examples of task shifting

Some African Countries like Ethiopia, Malawi, Mozambique, Sierra Leone have taken the bold step of finding alternatives by training mid-level health personnel to undertake surgical procedures, including Caesarean section

Liberia has decided to use midwives representing the first time this has ever been attempted

Problems with Task Shifting

- Difficulties with doctors accepting the ability of midwives to learn the skills needed to undertake this work
- Doctors worrying about their private practice
- Doctors worrying about sustainability once midwives have been trained
- Power differentials

Consequences of the lack of doctors in Liberia able to undertake advanced obstetrics

- Large numbers of pregnant women and newborn babies are dying or suffering life-long morbidity because of a lack of advanced obstetric ,care for complications of pregnancy and delivery

- The workload for those doctors who are working in maternity hospitals is overwhelming leading to "burnout" and driving doctors away from working in hospitals and into public health, working or the UN or NGOs, or even outside medicine

- There is a lack of apprenticeship based training for junior doctors because of the shortage of those qualified in advanced obstetrics

Liberia's Story

- 4 years ago, MOH became receptive to the concept of Task Shifting as a manpower enhancement strategy
- Consensus was built to begin a pilot in MNH at the C.B. Dunbar Maternity Hospital through collaboration between MOH, WHO and MCAI with LMDC In a regulatory role
- This formally began in October 2013 with the enrollment of two midwives to train in advanced obstetrics for 18 months, including surgery, with a subsequent 12 months of internship

WHY Midwives

Midwives:

1. know basic obstetrics and are used to identifying complications of pregnancy and delivery
2. understand when surgical interventions are needed
3. know how to safely organise labour, delivery and other associated wards
4. are accustomed to working with pregnant women and their families

Registration and licensing of midwives after training and where evidence of safe practice gained by examination and assessment

Essential that a contract is in place with MOH, LMDC, and LNMC prior to the onset of training which guarantees that successful midwives on this pilot programme will be registered and given a licence to practice in the public health system of Liberia as "obstetric clinicians"

Additional essentials for ensuring the adequacy of training and service delivery in the hospitals

- Essential equipment (e.g. each of the 3 training hospitals have been provided with a new obstetric ultrasound scanner, anti shock garments, vacuum kits, condom catheters)
- Anaesthetic equipment, drugs and supplies such as spinal needles
- Oxygen generators
- Essential drugs such as oxytocin, misoprostol, magnesium sulphate, IV antibiotics
- Essential surgical supplies such as sutures, urinary catheters
- Essential laboratory backup for blood transfusion and recently biochemistry
- Waiting homes
- Good antenatal care especially BP monitoring and control

CB Dunbar Hospital team plus new scanner

The First Chosen

The two midwives initially enrolled in the program, Hannah Gibson and Naomi Lewis, were selected

They have now completed their training and are fully licensed as “Obstetric Clinicians” by the LMDC and MOH

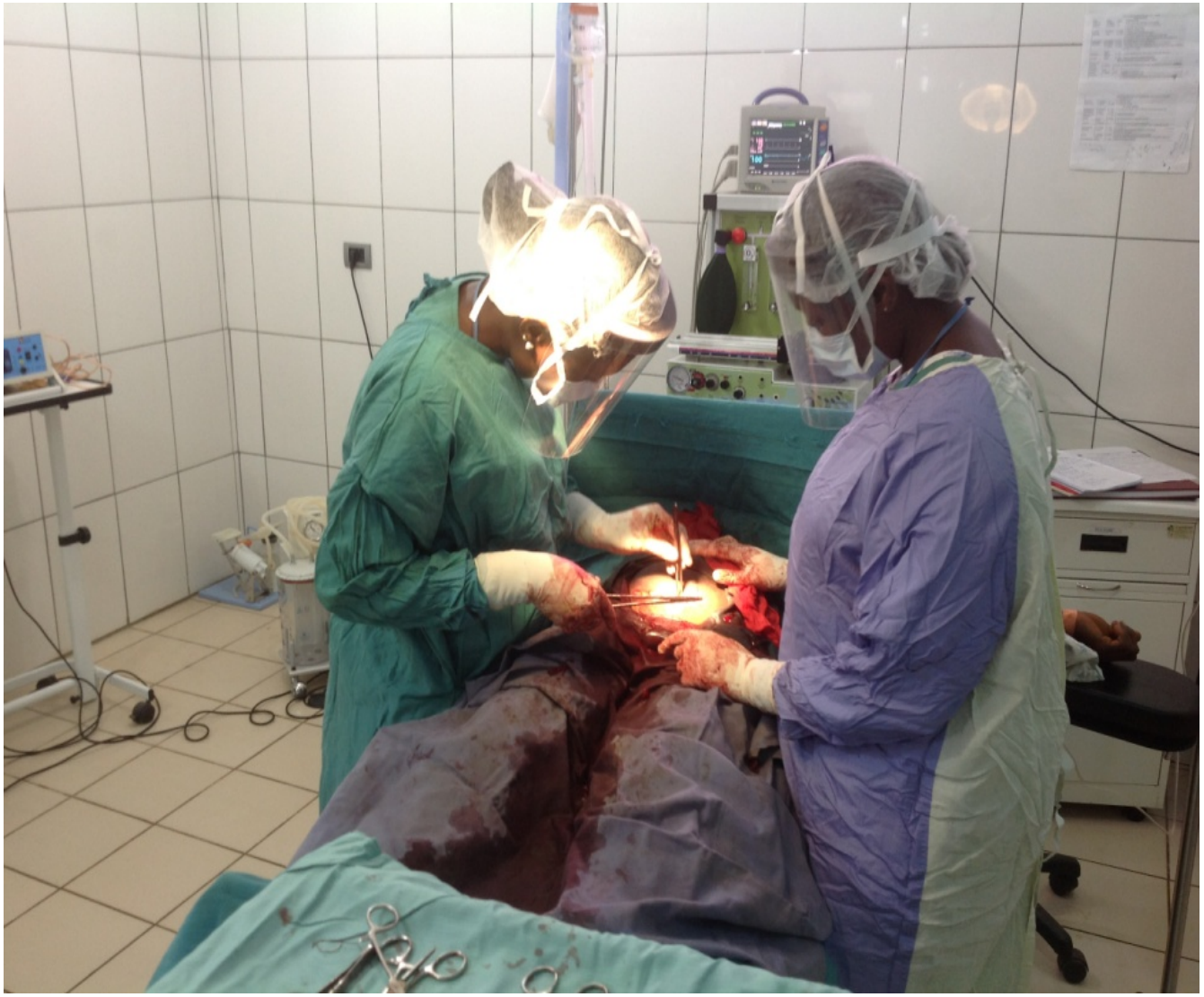
Naomi Hannah

Curriculum of training: part 1 skills

- Apprenticeship training** in advanced obstetric techniques supplemented by manuals, videos etc.

** *Every procedure undertaken by each midwife with details collected in a personal paper logbook and electronic database*

Naomi Lewis undertaking vacuum delivery (*with permission of the mother*)



Hannah leading a Caesarean section

Increasing responsibility and involvement over duration of training

At first, the trainees just assisted a senior doctor but, as time passed, they became the primary people undertaking the procedures, albeit always with a senior doctor in the hospital who could give advice or assistance.

At this stage, a trainee would often be working with – and supervising – a junior doctor, a peri-operative nurse or at least one other midwife.

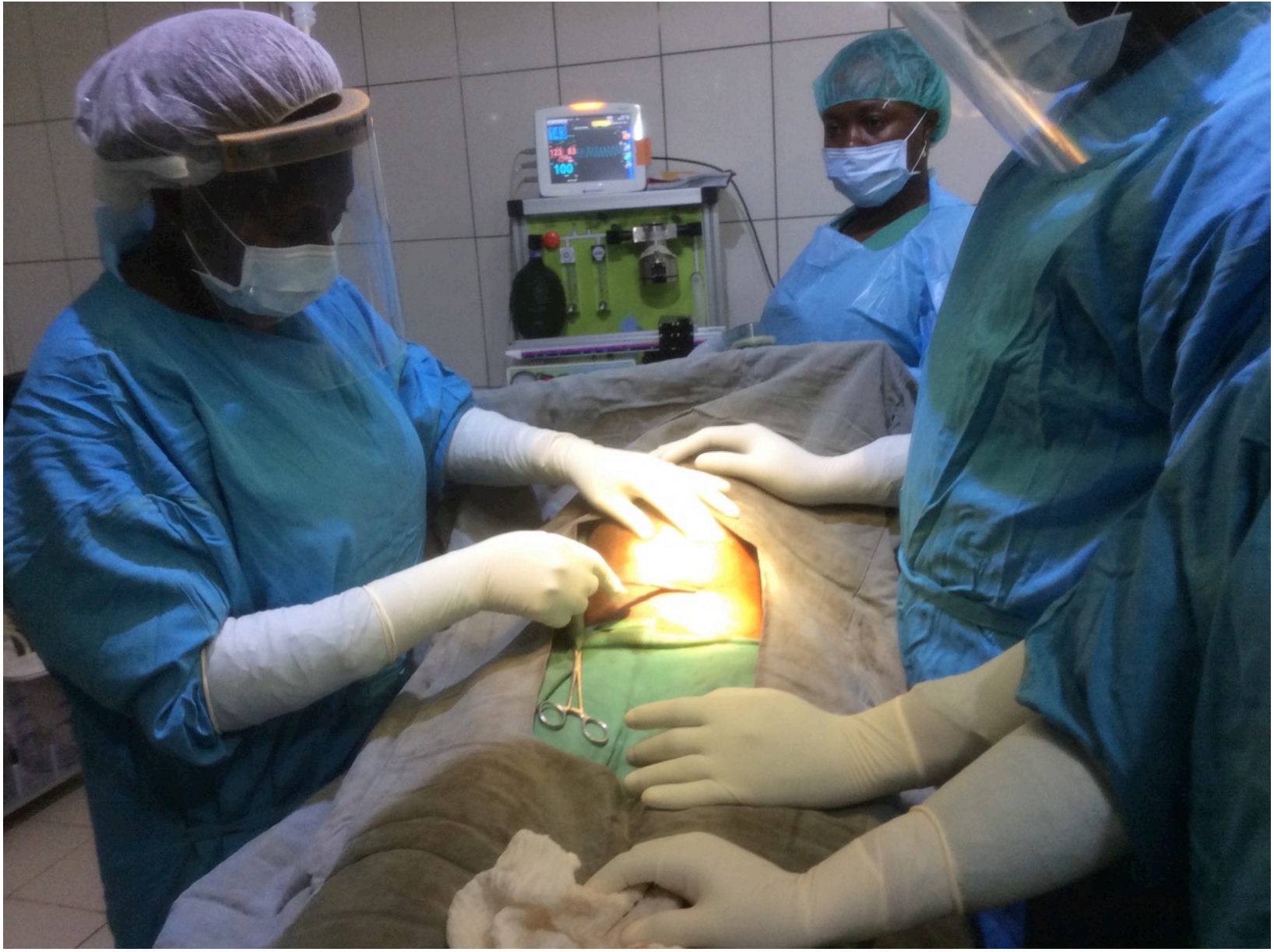
As time passed, the trainees were given more independence. For example, they were allowed to perform caesarean sections either with someone who had not been trained to do the procedure or with someone who had been trained but played no active role in the surgery. At this stage, a senior doctor was always available to give advice but that doctor could be off-site – e.g. asleep at home – or working elsewhere in the hospital.

Results

- After first 6 months the first two trainees successfully underwent an OSCE (Objective Structured Clinical Examination) conducted by two MCAI consultant obstetrician/gynaecologists from the UK and Netherlands and achieved high marks

- After 18 months– the midwives had become competent, safe and were independently performing major surgery including Caesarean Sections

Major procedures undertaken by first 2 trainees during 3 years of training	Number of patients
Caesarean section	473
Manual removal placenta	32
Vaginal breech delivery	31
Vacuum delivery	21
Repair ruptured uterus	12
Eclampsia or severe preeclampsia	80
Severe post-partum haemorrhage	44
Shock	28
Miscarriage	58
Ruptured ectopic pregnancy	7
Emergency hysterectomy	3



Naomi making initial incision

Benefits of the training observed at C B Dunbar Maternity Hospital

The trainees showed lots of enthusiasm being ready at all times to take initiatives and go the "extra-mile" because of improved confidence and self image

They worked throughout the Ebola outbreak

Hannah recently went for a patient from one of the peripheral clinics in the ambulance– she examined, intervened and delivered the baby and provided immediate post-partum care before coming back to the hospital.

Benefits (continued)

- Their enthusiasm for work has been transferred to other staff
- They serve as role model for other staff who want to be like them
- They provide leadership in the labour ward
- They triage and stabilize critically ill patients while getting help
- They initiate assessment of the patient with a working diagnosis and preparation (ultrasound scanning, arrangement for blood tests etc.)

Benefits (continued)

- They do ward rounds when doctors are occupied
- They do essential procedures: insertion of balloon tamponade in managing PPH, instrumental deliveries and Caesarean section
- They take pressure off doctors and provide them with time for needed rest
- They undertake skill transfer and provide some level of mentorship to junior doctors who come for training
- They serve as on-site tutors of nursing and midwifery students

Scale-up and roll-out of this programme?

- Funding for expansion (100,000 USD from WHO for next year of the programme aiming to enrol another 7 midwives and 2 physician assistants with experience in obstetrics)

- Once qualified:
  - Registration by requisite regulatory boards
  - Job Title upgrade and recognition by the CIVIL SERVICE
  - Appropriate salaries, reflecting the importance of their work

- A national obstetrician to undertake and oversee the training (Dr. Obed Dolo, Liberian consultant obstetrician)

- International experts in obstetrics present at intervals during the training, making frequent and regular visits to teach and mentor the candidates and ensure quality control

6 of the next 9 candidates about to start training

Community sensitisation

- Important for this programme as it involves a new approach to reducing maternal and neonatal mortality in Liberia

- Public meeting to launch the newly qualified/registered midwives

Conclusions: Liberia

- Task shifting : skills sharing by senior midwives undertaking comprehensive EmONC may be effective and sustainable in a country that has so few doctors

- In light of the results with the first two midwives, a decision has been made to scale up and roll out this programme in Liberia to train an additional 9 obstetric clinicians

- Their team-work with doctors can be particularly valuable in rural hospitals in resource-poor countries.


ERGENCY
www.mcai.org.uk