

# Emergency Obstetrics and Surgery in Southwest Ethiopia

Bernt Lindtjørn  
Arba Minch

E-mail: [bernt.lindtjorn@cih.uib.no](mailto:bernt.lindtjorn@cih.uib.no)

# Two conditions are needed to reduce maternal deaths:

- Safe delivery:
  - Comprehensive intrapartum care at Institutions
- All pregnant women should have
  - Access to such institutions
  - And they must use them when needed

# Our main work is at:

- Institutions
  - Arba Minch Hospital (training centre)
  - Four Hospitals
    - Jinka, Gidole, Chench, Saula
  - Five health centres
    - Konso, Kemba, (Laha, Laska, Turmi)
- With Woredas
  - Health centres
  - Health extension workers

# “Target population”



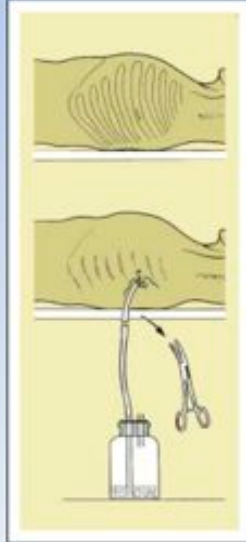
Woreda/ Zone	2 007	Adjusted 2010
Melo Koza	121 128	131 975
Denibo Gofa	81 158	88 425
Kucha Woreda	149 835	163 252
Boreda	67 947	74 031
Merab Abay	74 901	81 608
Arba Minch Zuria	165 680	180 516
Chencha	111 680	121 681
Dita	83 953	91 471
Daramalo	80 999	88 252
Zala	73 745	80 349
Uba Debre Zehay	69 113	75 302
Bonke	158 795	173 015
gezeGofa	63 366	69 040
Ayda	33 309	36 292
Arba Minch Town	74 843	81 545
Saula Town	23 370	25 463
kemba	155 748	169 695
Basketto	56 678	61 753
Konso	234 987	256 029
Dirashe	142 678	155 454
Dehub Omo	577 674	629 403
<b>SUM</b>	<b>2 601 587</b>	<b>2 834 552</b>

# Institutions

- Training
- Essential Equipment
- Supervision

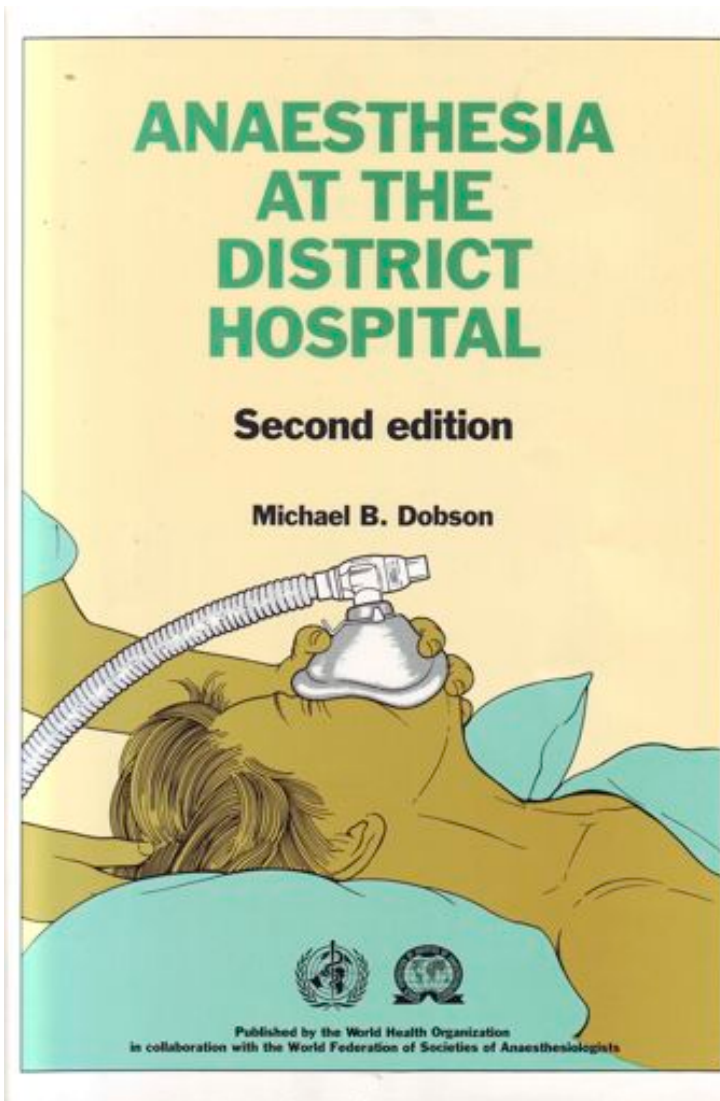
# Training: Health Officers

## Surgical Care at the District Hospital



- 4 plus 2 months
- Curriculum (minimum list of operations)
- Theoretical training (seminars and books)
- Must work in the delivery ward and in the OR
- Transparency and “no-blame culture”





- Nurse anaesthetists
  - ABC / Resuscitation (adults and neonates)
  - Ketamine
  - (Spinal)
- Scrub Nurse
  - Surgical equipment
  - Sterilization (“The Autoclave”)

Operation theatre in Kemba





## Konso Health Centre: Operation theatre





## Institutions: Equipment

- Standardized essential equipment for each rural hospital and health centre
  - Operation table, operation lamp
  - Necessary cloth for packing, cover
  - 4 CS sets, 4 delivery sets
  - Suction machines
  - Vacuum extractors
  - Simple autoclave, autoclave tape
  - Anaesthesia equipment (oxygen concentrator, adult and neonatal resuscitation equipment)

# Each institution must

- Provide rooms (painted and clean)
- Regular supply of water
- Staff (Two teams: 2 HOs, 4 nurses)
- Willingness to buy medicines and maintain work
- Willingness on how to use local resources
  - Clothes, plastic materials,
- Willingness to learn
  - The laundry
  - Cleaning

# Institutions: supervision

- Regular support visits
  - Assess performance
  - Transparency and “no-blame culture” on complications
    - Assess all operations and complications
  - Solving problems (examples):
    - “The autoclave does not work”
    - “The surgical instruments are not good any more”
    - “We need more reference books”
- Administrative matters: which is not a part of the supervision, but vital to the programme
  - Duty payments, etc

# Is surgery done by HO safe?

Results of the first 206 operations

(I have chosen to present these operations because they show difficulties in starting a programme)



## Operations done by HO after 6 months

Procedure	Goal: Assisted	Goal: performed	Actually Assisted	Actually Performed
<b>Emergency Obstetrics</b>				
Cesarean sections	10	10	29	41
Manual vacuum aspiration of the uterus for incomplete and spontaneous abortions	10	10	12	40
Vacuum extractions and outlet forceps	10	10	6	17
Manual removal of placenta	3-5	3	3	6
Insertion or removal of IUD	5	3	1	3
Laparotomy for ectopic pregnancy	2-4	3	3	1
Insertion/ removal of contraception implants	2-4	3	0	5
Tubal ligation	3	3	5	8
Vasectomy	Preferred, but not a must			0
<b>List of recommended interventions that the trainee preferable shall do</b>				
Induction and and augmentation of labour			0	0
Destructive vaginal deliveries			4	13
Exploration of uterine cavity			3	3
Repair of cervical tear			1	4
Repair of high vaginal tear			0	2
Repair of ruptured uterus			1	2
Total abdominal hysterectomy			4	5
			4	0
<b>Emergency surgery</b>				
Suture of wounds	10	30	14	53
Debridement	10	10	11	20
Fracture, upper extremity	5	5	7	7
Fracture, lower extremity	3	3	8	12
Chest tube	2	2	3	3
Urethral catheter	10	20	4	22
Suprapubic cystostomy	3	3	3	3
Emergency laparotomy	10	0	34	7

# Operations

- The main indications for surgery were
  - Cephalopelvic disproportion or obstructed labour (76 patients; 37%),
  - Foetal distress (43 patients; 21%),
  - Failure to progress (22 patients; 11%),
  - Previous C/S (13 patients; 6%),
  - Antepartum haemorrhage (12 patients; 6%)
  - Other: uterus rupture, cord prolapse, breech in primigravida and eclampsia

# Operation

- Operations done:
  - Caesarean section (C/S) was done on 199 operations
  - 8 operations were for uterine rupture.
- Intraoperative complications occurred in 5 patients.
  - Three of them were serious
  - One re-operation was done because of bleeding.
  - Three patients needed post-operative blood transfusions.
- Six patients had post-operative infections.
- The mean duration of stay was 7 days



# Mortality

- Two mothers (0.9%) died during operation or during their stay at the hospital.
  - Both deaths occurred during spinal anaesthesia.
- 23 (11%) stillbirths
- Neonatal deaths: Five children (2%) died during the stay at the hospital.
- The rate of stillbirths varied among the hospitals:
  - highest rate at the newly started hospital in Saula (17 of 23 stillbirths and 3 of 5 early neonatal deaths).

# Anesthesia

- Ketamine or spinal?
  - We now advise ketamine at newly started institutions
- Safe anaesthesia

# What are the limits?

- Quality of services
  - 1% mortality limit
- A balance on what is possible and what is desirable
- “there are certain things a HO should not do”
  - Limits of HO training
- BUT, some health officers are really good

# My wish: on training

- Surgeons and gynaecologists: They should mentor and supervise
- Use experienced HO as supervisors?
- Maintain the short training (4 + 2 model)
- Give the good HOs a chance to upgrade (masters course):
  - 6 x 5 training (in modules, at training unit and at their home institution)
  - Close collaboration University – Home institution
  - Focus on Adult learning: You will keep the staff and enhance the learning
- Introduce the 4+2 model for interns (doctors)

# My wish: The Woreda health services

- Introduce compulsory monthly reporting not only on number of antenatal controls, but on:
  - How many pregnant were labelled as “risky”?
  - What did they do with the risky mothers?
  - What was the outcome of the previous risky mothers?
- And, - link this reporting to the referral chain:  
HEW ==> HC ==> HO

Maternity village at Gidole Hospital: A good example



# More information

You can find more information about our programme, and download reports and curriculum at:

<http://bernt.b.uib.no>

<http://bernt.b.uib.no/training-programme/>