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| **Identifying Problems Related to Maternal and Infant Death Rates and Proposed Interventions in Ethiopia**  World Health Organization | 22-25 February 2005 |

# Executive summary

This document was developed for the World Health Organization’s (WHO) central office and the key stakeholders within the Ethiopia health system. This document addresses the outcomes from meeting and field visits with top health officials in relation to the high maternal and infant mortality rate in Ethiopia

Field visits were made to health facilities by a team including WHO staff, Ethiopian government officials and key health providers to identify deficiencies within a various health centers. In addition, discussions were held with the staff of multiple health facilities (including: regional/district hospitals and health centers) in Addis Ababa, Awassa, and Dilla in the South Nation Nationalities & Peoples Region (SNNPR).

The problems identified from the visits were:

* lack of specialists (surgeons, obstetrics, anesthetists),
* inadequate training to perform emergency surgical procedures safely for trauma,
* pregnancy related complications and anesthesia,
* lack of basic emergency equipment linked to the emergency surgical procedures,
* inadequate training in use,
* poor maintenance and procurement of basic emergency equipment, and
* lack of standard protocols.

To address these concerns, meetings were held in collaboration with the Ministry of Health and the SNNPR State Health Bureau. In these meeting WHO officials introduced the “Emergency and Essential Surgical Care” project, which aims to strengthen training of health care personnel at primary health care facilities in emergency and essential surgical skills and linked equipment. This project will empower them, to manage life threatening injuries and provide techniques for preventing the spread of infectious diseases in hopes of lowering the maternal and infant mortality rate.

The Regional Health Bureau will work in collaboration with the Health Science University to advise in the modification of training curriculum for the health officers. WHO training materials will be incorporated in the existing basic emergency skills and training course.

Recommendations were made for the preparation of a project proposal in collaboration the Ministry of Health and their partners with local teaching hospitals for strengthening capacities in training of health personnel. Collaboration is foreseen with other partners such as SIDA, UNICEF, UNFPA, Japan, World Bank, GTZ, for a coordinated comprehensive approach to reduce the high maternal and infant mortality in Ethiopia.

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# Background

Ethiopia has a maternal mortality rate of 871 per 100,000 live births, and an infantmortality rate of 96.8 per 1,000 live births (2004). Studies have shown the causes of maternal mortality are mechanic dystocia, eclampsia, bleeding and sepsis following an abortion or delivery. It has also been identified that mothers in areas affected by droughts are at an increased risk due to stress, poor nutritional status and sanitation, and limited access to health services and essential drugs.

Ethiopia is a federal state, divided into nine National Regional States and the two Administrative City. The National Regional States are further divided into zones, *woredas* and *kebeles* (i.e. districts and counties). Each region has a Regional Health Bureau and a *Woreda* Health Office. In 2004/05, there were a total of 6640 primary health care (PCH) facilities in the country. The population per PCH rate was 24,513:1 which is three times higher than the population per PHC in the rest of sub-Saharan Africa. This also means there was only one hospital bed for every 5,276 people, this number is about five times higher than the average for sub-Saharan Africa. The limited number of health institutions, inefficient distribution of medical supplies and disparity between urban and rural areas has made it difficult to increase people’s access to health-care services, including those of expecting mothers.

The WHO project on Emergency and essential surgical Care was introduced through a WHO AFRO Regional Workshop, held in Uganda, December 2003 (report on the website) to key decision makers representing 10 countries in Africa and international partners. This created an interest among health providers to organize WHO meetings/workshops to sensitize stakeholders to address Emergency and essential surgical Care as a public health issue.

# Field Visits and Identified Problems

To identify specifics to why the maternal and infant mortality rate is high, a team including WHO staff, Ethiopian government officials and key health providers visited the health facilities (regional, district hospitals and health centers) in Addis Ababa, Awassa, Yirgalem, and Dilla in the South Nation Nationalities & Peoples Region (SNNPR). Visits were made in particular to the emergency/admissions rooms, operating rooms, postoperative wards. Discussions were also held with the hospitals’ director, doctors, nurses, and health officers.

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| **Health Facilities Visited:** |
| Awassa Referral Hospital |
| Southern University College of Health Sciences, Awassa |
| Yirgalem Hospital (district level hospital) |
| Dilla Hospital |
| Yirgachefe Health Center |
| Altawondo Health Center |
| Zewditu Memorial Hospital, Addis Ababa |
| Tikur Anbassa Specialize Hospital (Univeristy Hospital),  Addis Ababa |

The problems identified from the visits were:

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* inadequate training in use,
* poor maintenance and procurement of basic emergency equipment, and
* lack of standard protocols.

# Introduction to Integrated Management for Emergency and Essential Surgical Care

To address these problems WHO hosted meetings on "Integrated Management for Emergency and Essential Surgical Care (IMEESC)" (outlined below) in collaboration with the Ministry of Health and South Nations Nationalities and Peoples Regional State Health Bureau (SNNPR-BOH) , Ethiopia. These meetings brought health providers, policy makers and partners together, with an overall aim to facilitate a collaborative and integrated approach to improve emergency and essential surgical care at primary health care facilities.

Additional focus was taken with SNNPR-BOH as the South Nations Nationalities and Peoples Regional is one of the regions with highest maternal and neonatal morbidity and mortality. The major reason behind this is a lack of access to essential obstetric care and inadequate care during pregnancy and childbirth. Only a few hospitals are providing emergency obstetric care and almost all of the health centers do not have the capacity to manage obstetric cases when complication arise during a pregnancy, delivery, or the post-partum period.

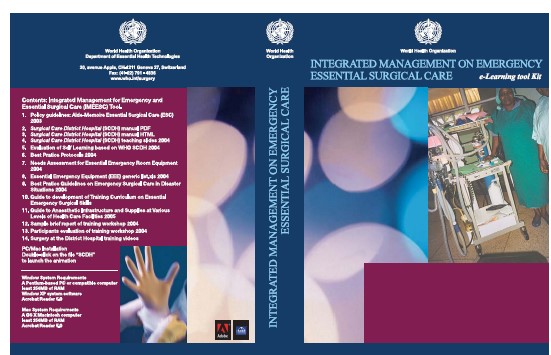
The meetings were held with three separate health entities, the WHO County Office, the Ministry of Health, and the (SNNPR) State Health Bureau. The minutes of the meetings can be found within the appendix along with an in-depth agenda.

The overall objective of these meetings was capacity building to improve the quality of emergency and essential surgical care at resource-limited healthcare facilities, in relation to the maternal and infant mortality rate.

These are the specific objectives of the WHO hosted meetings:

* Introduction of the WHO IMEESC toolkit
* Collaboration to strengthen capacities through a standardized training tool including common cross cutting issues towards health personnel and patient safety at resource limited health care facilities

**Integrated Management for Emergency and Essential Surgical Care** (**IMEESC) toolkit**

The participants were introduced to the use of WHO IMMESC e-learning toolkit which is based on the WHO training manual *‘Surgical Care at the District Hospital’* (SCDH). this toolkit references and incorporates the standard WHO recommendations related to the cross-cutting issues in their training programs.

The IMEESC toolkit is aimed at policy makers and health providers to provide guidelines on minimum requirements to improve emergency and essential surgical care at resource limited health care facilities. It contains four CDs of training videos related to *Surgery at the District hospital* andone policy and additional training CD containing the following materials:

Figure 1: A selected page of the IMEESC toolkit

*Policy:*

* Policy guidelines: Aide-Memoire Essential Surgical Care
* Needs Assessment for Essential Emergency Room Equipment
* Essential Emergency Equipment generic list.xls Guide to Development of a Training
* Curriculum on Essential Emergency Surgical Skills
* Guide to Anesthetic Infrastructure and Supplies at Various Levels of Health Care Facilities

*Additional Training:*

* Surgical Care District Hospital (SCDH) manual pdf and html
* Surgical Care District Hospital (SCDH) teaching power point
* Evaluation of Self Learning based on WHO manual SCDH
* Best Practice Protocols for Clinical Procedures Safety
* Best Practice Guidelines on Emergency Surgical Care in Disaster Situations
* Sample brief report of training workshop
* Participants evaluation of training workshop
* Model Agenda training workshop

# Recommendations and Conclusions

The meetings and field visits helped to identify the 8 recommendations bellow. These recommendations are aimed at the original problem of high mortality rate for mothers and newborns, but may also increase the quality of health in a broader sense in Ethiopia.

1. The meetings report should be shared with all the participants and can be disseminated to local and international partners interested in improving access to emergency and basic surgical care at Ethiopia’s resource limited health care facilities.
2. WHO will consider the possibility of printing the Surgical Care Manual for training and education at the District Hospital.
3. Joint proposal will be developed in collaboration with outside groups to improve the emergency surgical care at resource limited health care facilities. These proposals will target a reduction in death and disability with emphasis on women and children.
4. The WHO IMEESC toolkit will be used to plan the training curriculum of Clinical Officers in Ethiopia, in addition to established medical education programs with standardized training.
5. Training at district hospitals and community level should be strengthened to manage injuries (road traffic accidents, burns, drowning, falls) and pregnancy related complications
6. The MoH will nominate a focal department to work with WHO on piloting the IMEESC training in Ethiopia.
7. Preparation of a project proposal will commence identifying districts for introduction of the WHO IMEESC tool in collaboration with partners and MoH. The aim will be to strengthen capacities in training of health personnel in life saving emergency and basic surgical procedures and equipment.
8. Lastly, the team will finalize the proposal for training of trainers’ workshop (to train health officers, doctors and nurses) in emergency and essential surgical care with tentative dates for 2005.

#### Conclutions

This training of facilitators and stakeholder’s meetings will be followed by further training workshops as suggested by the MoH, WHO and partners in 2005. The meetings gave the participants the direction to use a standard WHO training tool. This tool will help to improve the quality of basic emergency and surgical intervention skills at primary healthcare facilities with a horizontal approach. It also resulted in a plan to prepare clinical officers training curriculum by MoH with the WHO country office.

# Appendix

## Meeting Minutes

### Meeting at WHO Country Office

Discussions addressed the following issues and plans:

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| **Meeting Leaders** |
| **Dr Babaniyi**  WHO/WR/Ethiopia |
| **Dr Abonesh**  (Program Officer National Health, WHO) |
| Dr Ato Haddis  (WHO) |
| **Dr Kidane**  (National Program Officer, WHO and MoH) |
| **Dr Tsega Kebede and Dr Tezera Chaka**  Trauma Care, University Hospital |

* + A horizontal approach for the integration of emergency and essential surgical care at first referral level health care facilities is needed. This includes cross cutting issues for life saving procedures in injuries as a result of caesarean section, unsafe abortion and obstetrics fistula. This could involve incorporation and implementation of the WHO Integrated Management Package on Emergency and Essential Surgical Care (IMEESC) for strengthening pre-service training and education programs in at health centers.
  + WHO Training of Trainers workshop in collaboration with Ministry of Health, for policy makers, health providers and partners involved in training and education of health officers, doctors, nurses, technicians.
  + Existing WHO collaborations with Associations of Surgeons of East Africa and international surgical and anesthesia associations, and universities involved in training in emergency and surgical care at health centers, in Ethiopia will continue.
  + Partners such as Tropical Health Education Trust is involved in the current existing health officers training.
  + Canadian Network International Surgical Society conducts the instructor workshops for the program every 3 years in each department.
  + German Association of Surgeons conduct surgical skills for graduating medical students from Jimma University.
  + Coordination will begin between vertical programs on crosscutting issues for better utilization of the limited resources.
  + Work towards a standardized training and accreditation of health facilities is in the making.

### Meeting at Ministry of Health

Discussions to address the reduction of high maternal mortality, led to the following consensus:

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| **Meeting Leaders** |
| **Dr Tedros**  State Health Minister |
| **Dr Girma Azene**  Head of Department of Planning & Programming |
| **Dr Eyob Kamil**  Bureau Head, Addis Ababa City Government Health Bureau |
| **Dr Tesfenesh Belay**  Head Family Health |
| **Dr Ato Yohannes Tadesse**  Head of Training and Health Services |

* Health centers have the following problems:
  + lack of specialists (surgeons, obstetrics, anesthetists)
  + Inadequate training to perform emergency surgical procedures safely for trauma, pregnancy related complications and anesthesia.
  + lack of basic emergency equipment linked to the emergency surgical procedures
  + inadequate training in use, maintenance and procurement of basic emergency equipment
  + lack of standard protocols
  + lack of coordination with the vertical programs in cross cutting issues
* the Ministry of Health is in the process of planning to post at least 2 health officers at every health center. To expedite the process more health officers (5000) will be trained within a few years, starting in October 2005, rather than waiting to increase the number in 2015. A WHO coordinated training of trainers would be beneficial prior to the start of the health officers training course.
* Train health officers in emergency obstetric care will begin, which includes emergency surgical procedures and anesthesia. These interventions will result in health officers becoming more confident to perform basic emergency surgical and anesthetic procedures. the hope is this will decrease the referrals and over load of emergencies within these referral hospitals.
* Collaboration with other partners such as SIDA, UNICEF; UNFPA, Japan, World Bank, GTZ, for a coordinated comprehensive approach to reduce the high maternal mortality in Ethiopia will also begin.

### Meeting at South Nations Nationalities and Peoples Regional State Health Bureau

The following issues and plans were discussed:

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| **Meeting Leaders** |
| Dr Shiferaw  Head, Regional Health Bureau |
| **Dr Sunirmal Ghosh** Consultant Surgeon, Tropical Health Education Trust (THET), U.K. |
| **Dr Aberra Medical Director** Debub University Referral Hospital, Awassa |

* Expansion of the Existing Health Science Colleges such as three midlevel diploma graduating colleges namely Awassa Health Science College, Arbaminch Health Science College, and Hosanna Health Science College have been reorganized
* Upgrading of Health Assistants into Clinical Nurses to improve the capacity levels of different professionals through in-service training in different colleges, universities, and hospitals. Specifically, health bureau intended to upgrade all health assistants to midlevel clinical nurses in the short run.
* Emergency Obstetrics Skill Upgrading to build the capacity of the health worker in skill of Emergency obstetric care and support the health facilities with necessary vital or lifesaving emergency equipment in hospitals where there are no specialized professionals. The training team also includes clinical nurses so that they can acquire skills to provide anesthesia and assist in operative procedures. A total of 13 high volume health facilities are targeted to be included in this plan.
* Distance Education
* Logistics Improvement and Management Information System
* The role of partners in the integration of WHO tools for training of health officers in SNNPR.
* Increasing the number of health officers trained and modifying the present training curriculum, to not only to meet quantity but also quality.
* Regional Health Bureau will work in collaboration with the Health Science University to advise in the modification of training curriculum for health officers.
* Strengthening the practical skills of health officers through incorporation of WHO training materials in the existing THET basic emergency skills training course.

The non-specialist doctors, nurse anesthetists and health officers at the rural and primary healthcare facilities discussed that the training was often inadequate to give them the confidence to performing emergency surgical procedures, including anesthesia and use of equipment in the life threatening conditions in trauma, infection, and pregnancy related complications.

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| List of participants for meetings | |
| **Dr Tedros A Ghebreysus**  State Minister,  Federal Ministry of Health  Adis Ababa, Ethiopia | **Dr Tezera Chaka**  Consultant Orthopedic Surgeon Head,  Department of Orthopedics  Adia Ababa University,  Faculty of Medicine  Tel:0911621120 P.O.Box  e-mail:tchaka50@yahoo.com  Addis Ababa, Ethiopia |
| **Dr Shiferaw Tekelmariam**  Head, South Nations and Nationalities and Peoples Region, State Health Bureau, (SNNPR-BOH)  Awassa, Ethiopia  mobile no -09237530 | **Dr Aberra A Gobezie**  Southern Ethiopia-Gwent Health Link Coordinator  Medical director,  Debub University Referral Hospital,  Awassa, Ethiopia  mobile no – 0916824834  aberraG2000@yahoo.com |
| **Dr. Girma Azene**  Consultant Health Sciences Specialist Head, Department of Planning and Programming  Ministry of Health  Addis Aababa, Ethiopia  moh@telecom.net.et | **Dr Sunirmal Ghosh**  Consultant Surgeon and Secretary  Southern Ethiopia-Gwent Health Link Nevill Hall Hospital  Brecon road, Abergavenny, Wales U.K  Tel 00441873732439  [BikuGhosh@aol.com](mailto:BikuGhosh@aol.com) |
| **Dr. Eyob Kamil**  Bureau Head  Addis Ababa City Government Health Bureau  Adis Ababa, Ethiopia | **Dr Zelalem Kebede**  Head, Southern University College of Health Sciences,  Awassa, Ethiopia  mobile no -091827598 |
| **Dr. Ato Yohannes Tadesse**  Head of Training and Health Service Department  Ministry of Health  Addis Aababa, Ethiopia | **Dr Asfowssen Bekele**  Dean, faculty of medical sciences  Awassa, Ethiopia |
| **Dr, Tesfenesh Belay**  Head, Family Health Department  Ministry of Health  Addis Aababa, Ethiopia | **Dr Nebiyu**  Surgeon, Dilla hospital Dilla  Awassa, Ethiopia |
| **Dr Tsegazeab Kebede**  Consultant Surgeon Consultant on Pre-hospital care and emergency care, Injury prevention and road safety  tel: 0911208345(mobile)  P.O.Box 15836  e-mail:tsegaz@yahoo.com,  Addis Ababa, Ethiopia | **Dr Ato Basmo**  Head of training,  Yirgalem Hospital Yirgalem  Awassa, Ethiopia |
| **Dr Samson**  Obstetrician Awassa College of Health Sciences(ACHS)  Ethiopía | **Sister Workie**  Anesthetic Nurse  Dilla Hospital Ethiopía |
| **Sister Meskerem**  Pediatric Nurse,  Dilla Hospital Ethiopía | **Prof. E Parry**  Chairman, Tropical Doctor Tropical Health Education Trust (THET)  UK  Tel 0044 2076798210 |
| **Dr. Adriana Ignea**  dres\_ignea@yahoo.de  Tel: 0025 11 551 88 56  Addis Ababa, Ethiopía | **Dr. Johann Ignea**  Tel: 0025 47 111 7989 / 0025 97  Jimma, Ethiopía |
| WHO secretariat | |
| **Dr Olusegum Ayorinde Babaniyi,**  WHO Representative WHO/WR/Ethiopia,  Addis Ababa, Ethiopia  adugnat@et.afro.who.int | **Dr Abonesh HaileMariam**  Program Officer, Family Health, WHO, Country Office  Addis Ababa, Ethiopia |
| **Dr Ato Haddis (WHO),**  WHO, Country Office  Addis Ababa, Ethiopia | **Dr Kidane Ghebrekidan**  Obstetrician with MOH  National Program Officer, WHO  Addis Ababa, Ethiopia |
| **Dr Meena Nathan Cherian**  Project: Emergency & Essential Surgical Care Clinical Procedures Unit (CPR)  Department of Essential Health Technologies  World Health Organization,  Geneva, Switzerland  tel:0041 22 791 4011;  fax: 0041 22 791 4836 cherianm@who.int;  www.who.int/surgery |  |

## Program Agenda

**WHO Integrated Management for Emergency & Essential Surgical Care**

22-25 February 2005, Addis Ababa, Ethiopia

1. **Meetings with focal persons in WHO country office, Ethiopia**
2. **Visits and meetings with directors of:**

* Teaching hospital
* District Hospital
* Commune hospital
* Primary health care facilities

1. **Meetings with Ministry of Health departments, Addis Ababa, Ethiopia**

* Need for Strengthening training at primary health care facilities: State Minister of Health

1. **Meetings at SNNPR Regional Health Bureau, Awassa, Ethiopia** 
   * + **Opening remarks** 
       - Health profile: Head Regional Health Bureau
       - Role of WHO project emergency and essential surgical care to reduce death and disability in injuries: WHO /country office
       - The WHO Clinical Procedures unit: Improving emergency and essential surgical care at resource limited health care facilities: WHO /HQ
     + **Presentations on Situation analysis and needs of emergency care at first referral level health facilities in SNNPR**
     + **Introduction to the WHO “Integrated Management on Emergency and Essential Surgical Care (IMEESC) tool kit”**
     + **Round table discussions**
       - Strengthening capacitieswith an integrated approach for Health Officers training in Ethiopia
       - WHO IMEESC tool as a standard training for clinical officers, medical and nursing students
       - Collaborative approach & integration to emergency procedures in trauma, obstetrics, anesthesia, infections (HIV), patient safety at first referral level health facilities linking training materials from other WHO departments.
       - Evaluation forms for assessment of quality of care at first referral level health facilities.
     + **Recommendations and action plan**
     + **Closing remarks**