WHO Workshop with Ministry of Health Mozambique on Strengthening Emergency and Essential Surgical Procedures with linked Equipment at Rural Hospitals

12-16 September 2005

Maputo, Mozambique
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1. Executive summary

The World Health Organization with the Ministry of Health (MoH) Mozambique held its first 'training of trainers' workshop in the African region aimed to improve the quality of emergency and essential surgical care at resource-limited healthcare facilities. The participants included doctors, nurses, surgery technicians representing rural hospitals from all provinces including Maputo City, specialists in nursing, surgery, obstetrics, trauma, anaesthesia, emergency and disasters, international and local partners interested in improving emergency care.

Prior meeting in Mozambique identified a need for reinforcing the emergency care. Based on this a project proposal entitled “Strengthening Emergency and Essential Surgical procedures and equipment at Rural Hospitals in Mozambique” was developed by the MoH with support from WHO country office.

The first workshop was held in Regional Center of Health Development (CRDS) in Maputo, 12-16 September 2005. Before the workshop a brief situational analysis was done using the "WHO need assessment tools” and the Essential Trauma Care Guidelines checklist. There is a plan to repeat this exercise in 6 months to assess progress.

Workshop participants also visited Mavalane General Hospital and Central Hospital of Maputo for practical 'hands-on' basic skill training, lectures and clinical case discussions.

Materials used during the training:

Facilitators and trainees were introduced to the WHO Integrated Management for Emergency and Essential Surgical Care (IMEESC) tools which includes life saving emergency surgical and anaesthesia interventions, equipment, sterilization, oxygen, waste disposal, record keeping, monitoring and evaluation on quality of care, prevention of HIV transmission using surgical and anaesthetic techniques to minimize blood loss, intravenous fluids, and treat anaemia thus reducing unnecessary blood transfusions.

The WHO Best Practice Protocols for Clinical Procedures Safety was used for teaching topics like planning in trauma and disasters, universal precautions, hand-washing, cardiac life support, eclampsia, burn, transportation, application of locally made splints and plaster, care of the unconscious, anaesthesia and postoperative checklists to assure that the Right Patient gets the Right Surgery on the Right Side at the Right Time by the Rightly Trained Health personnel.

Some of the materials for the workshop were translated into the local language (Portuguese) and simultaneous translation was available for all the sessions. An evaluation done at the end of the workshop scored the participants' opinion of the workshop and the training tools, including e-learning, with a mean average score of 4 (on a range of 1 to 5).

Recommendations and action plan included that the IMEESC tools need to be translated and adapted, and each of the 10 rural hospitals represented in the workshop will organize basic skills training of health personnel for all levels of care (non specialist doctors, nurses, technician, and paramedics) This will be followed by an evaluation after 6 months and 1 year by the Multidisciplinary Working Group (key health providers, MoH and WHO office Mozambique).
2. Background to the workshop:

A WHO “Training of Trainers” workshop with the MoH Mozambique on Essential Emergency Surgical Procedures with linked Equipment was held in Maputo, Mozambique 12-16 September 2005. This was the first WHO training workshop with MoH Mozambique, aimed at improving the quality of emergency and essential surgical skills of surgical technicians at primary healthcare facilities.

2.1 Planning meeting

Following the review of the WHO manual Surgical Care at the District Hospital at the Association of Surgeons of East Africa (ASEA) and College of Surgeons of East, Central and South Africa (COSECSA) annual meeting held at Songue, Tete, Aug 2003, suggestion was made on a strategy for its wider application in training of non-specialist doctors, nurses, clinical officers, technicians, paramedics to improve basic surgical and anaesthesia care.

A WHO Regional Workshop on Essential Surgical Care (report on website) for facilitators representing 10 countries of East, West, Central and South Africa (ASEA, COSECSA) was held in Kampala, Uganda, Dec. 2003, to encourage collaborations with partners for to improve the quality of basic surgical training at first referral health facilities in Africa.

Prior to this training of trainers workshop, visits were made to teaching and rural hospitals in Maputo, Songue-Tete provinces. Meetings were held with facilitators (surgeons, obstetricians, anaesthetists, nurses of teaching hospitals), president and executive members of the ASEA and Ministry of Health (MoH) Mozambique. A 'Multi-disciplinary Working Group' was established under the chair of Department of Medical Assistance (MAD), MoH consisted of representatives from MAD, Planning and Cooperation Department (PCD), National Surgical program, Surgical Department of Central Hospital, Maternal and Child Health Research Centre, and WHO Office Mozambique.

One of the suggestions was the development the project proposal by MoH assisted by WHO country office titled Strengthening Emergency and Essential Surgical Procedures and Equipment at Rural Hospitals in Mozambique. The Department of Medical Assistance, MoH will implement, monitor and evaluate the project with assistance of WHO country office. Dr Girrido, Health Minister, had approved the project and was very pleased that this training workshop was being organised to strengthen health personnel at rural health facilities.

One of the most important planned activities in the project proposal was this Training of trainers in Emergency and Essential Surgical Procedures. A situational analysis was done using the adapted "WHO needs assessment tools' for rural hospitals represented in this workshop. The same tool will be used after 6 months and one year following the training workshop, to assess the progress made.
2.2 Situation analysis of health facilities: needs assessment of rural health facilities

Mozambique has a population of 19 436,452 inhabitants with 73% living in rural areas. Approximately 46% are under the age of 15 and 23% are women of reproductive age. AIDS is an increasing challenge. Mozambique is one of the countries with the highest maternal mortality in the world, due to the lack of trained personnel, lack of equipment, inappropriate physical structures, inadequate patient management, a poor referral system, long distances to travel to hospital and the lack of transport.

The health system in Mozambique is provided by the “Ministry of Health through hospitals, health centres and health posts. There are 3 levels of organisation of health, national, provincial and then finally at the district level. The lowest level of care is provided by Health Posts (total of 638, 27,674 people per Health Post). Between the Central Hospitals and the Health Posts there are the following types of health dispensing units:

- Health Centres (516, 34,217 people per Health Centre)
- Rural Hospitals (total of 25, 706,240 people per Rural Hospital)
- Provincial or General Hospitals (total of 12, 1,471,333 people per Hospital)

These different health facilities provide different services and have different types of personnel present. These vary between facilities and between cities. At both hospitals and some health centres the first port of call is the Banco de Socorro (literally Bank of Help). This serves as the equivalent to the emergency room, but unfortunately due to the workload of the health centres and hospitals it is not always used for this purpose. Mozambique has 3 Central hospitals in each region located in Maputo for the Southern region (the final referral hospital for Mozambique), Beira for the Central region and Nampula for the Northern region. Some who can afford seek care in South Africa and sometimes even Portugal.

The national health system in Mozambique comprises the public sector (National Health Sector) and the private sector. The private sector has two types: a profit and a non-profit. The National Health Sector in the main provider of health services and it is organized in four levels of health care provision. The levels I and II are the most peripheral providing primary health care. Level II serves as reference to clinical conditions that can not be dealt with at level I, such as delivery complications, injury, and medico-surgery emergencies, among others. After the country became independent, the MoH faced a shortage of qualified human resources in various areas, among which the areas of assistance to medico-surgery emergencies. Concerned with this problem, the MoH decided to establish a profile of a mid-level health professional (technician) that would be trained to respond to the needs at rural level and that would serve as the first reference level for surgery emergencies. It was in this context that the "Surgery Technician" appeared, with focus on the areas of emergency surgery care, general surgery, obstetrics and trauma, assigned to rural hospitals, the reference level for the levels I and II.
The World Health Organization developed an e-learning tool kit on Integrated Management Emergency and Essential Surgical Care (IMEESC) for policy makers and health providers, to provide guidance on WHO recommendations for minimum standards on emergency and essential surgical care in trauma, obstetrics and anesthesia at first referral level health facilities.

3. Introduction to the workshop and the need for training

After the adoption of the proposed workshop agenda, presentations were made on the WHO strategies for essential surgical care project and situation analysis on essential surgical care in Mozambique.

Dr Mouzinho Saide, National Health Director, MoH emphasized the role of surgery in public health interventions and the need to integrate the basic skills training in rural health facilities at each level of care which could contribute in reducing morbidity and mortality from trauma and pregnancy-related complications. This is the first time such a training workshop is being conducted integrating activities in rural health facilities addressing MDGs (improving maternal and child health and combating HIV). Efforts are being made by MoH towards improving the quality of health care given safely at rural healthcare facilities. MoH Mozambique is unique in establishing a post of surgical technicians who are the front line health providers managing emergency surgical procedures at first referral level health care facilities at remote difficult areas.

Dr. Americo Hassane, Head of Medical Assistant Department, (MoH) highlighted that there was a need to classify health units in the country. There is a shortage of health professionals, especially because most surgeons are practising in the urban areas with no specialists in some rural hospitals. As a result of inadequate facilities and untrained staff at some district health care facilities, the increased incidence of postoperative complications is a major concern. Sometimes there was equipment but no one to operate it.

Dr Pierre Kahozsi, acting WHO representative represented WHO country office and explained how this training project is aiming to meet the 3 Millennium Development Goals (child and maternal mortality, HIV). This training would address patient safety issues, teach basic skills, and monitor surgery outcomes and decisions on referrals to reduce death and disability in acute surgical conditions, trauma and pregnancy-related complications. He mentioned that, there is a need for:

- Appropriate facilities at district and provincial level with minimum basic essential emergency equipment;
- Reinforcement of basic emergency and surgical skills of health personnel working at first level referral healthcare facilities; and
- Good national strategies for motivation and retention of these health personnel at first level referral healthcare facilities.
4. Objectives

General Objective
To build and strengthen capacities of basic skills training in integrated management of emergency and essential surgical procedures with appropriate linked equipment at resource-limited health care facilities.

Specific objectives
1. Training in the use of the IMEESC tools for education and adding value to the training programmes in surgery, trauma, obstetrics, anaesthesia, emergencies and disasters.
2. Plan the integration of training programme to improve the knowledge and professional skills of health personnel in the identified health facilities.

5. Target audience (Master Trainers)

The participants included doctors, nurses, surgery technicians representing rural hospitals from all 10 provinces and Central Maputo. The workshop included facilitators representing international and local partners interested in reducing death and disability as a result of injuries in road traffic accidents, violence, pregnancy related complications, disasters. The teaching faculty were specialists in surgery, trauma, anaesthesia, obstetrics, emergency and disaster management, senior nurse from the Central Hospital Maputo.

There were 25 participants including policy makers from the MoH (MAD, National Surgical Program, and Reproductive health), stake holders and key health providers (directors of surgery, anaesthesia, emergency and disaster, surgery technicians, nurse in charge). Participants represented hospitals (HR de angonia, Hr de Marromeu, HR de Xinavane, HR de Montepuez, HR de Mocuba, HR de Chokwe, H distrital de Zavala, HR de Cuumba, HR de Namapa, HR de Catandica from 10 provinces and 3 hospitals from Maputo (Mavalane, Jose Macano, Maputo Central). Facilitators for the training sessions were specialists representing surgery, obstetrics, trauma, anaesthesia, orthopaedics, emergency and disaster management, surgical and anaesthesia nursing. (See Annex I for list of participants).

6. Presentations on the situation analysis of three selected rural hospitals
Marromeu, Angonia and Xinavane (participants from rural hospitals).

A result of a situational analysis done at the rural hospitals (10) where participants worked was presented. The "WHO needs assessment tools for monitoring and evaluation of emergency care at primary health care facilities" and the WHO Essential Trauma Care Guidelines were adapted, translated and used for the assessment. (See in Annex III-V for the copy of the instruments).

The information collected included the following:

i. Type of health facility,
ii. Human and other resources (equipment, supplies and medication) available for the emergency room
iii. Existing Infrastructure
iv. Quality of care, access and utilization
v. Safety measures
vi. Knowledge and skills
vii. Existing policies
The main findings were:
- Lack of information on policy, standards of care, minimum supplies and essential equipments
- Human Resource: Limited number of health care workers: per hospital in general around 2 nurses, 1 midlevel health personnel (such as specialized technicians) and 2 other health professionals (such nurses, assistants, etc)
- Existing Infrastructure: no specific emergency room or specified area for emergency care, irregular water and electricity supply, no maintenance for equipment or training for staff on equipment maintenance
- Lack of protocols and appropriate and user friendly training materials
- Limited skills of health professionals on current and safe use of equipments; only training received is during formal professional training
- Lack of proper monitoring and evaluation

7. Training workshop methodology

The training was conducted at Regional Center of Health Development (CRDS) with visits and practical hands-on skills training sessions at Maputo Central Hospital and Mavalane Hospitals. The skills training used a multidisciplinary approach. The working language for the training was Portuguese with simultaneous translation in English available for all the discussions and lectures.

The workshop provided participants the experience and tools for the implementation of effective education and training activities. The interactive learning methods were used to train participants with the objective that that they would be able to adapt and apply a standardised format to their teaching programmes. Through the hands-on training, group exercises, role play, the participants were able to simulate their future training activities.
This Basic Skills training of trainers workshop had several components with lectures, group discussions and 'hands-on basic skills training'. The teaching focussed on improving the quality of emergency and essential surgical care adapted to their clinical settings. The trainers were trained to teach and use the WHO IMEESC tool for improving basic skills in surgery, obstetrics, trauma, anaesthesia, and nursing at all levels of care (non specialist doctors, nurses, surgical and anaesthesia technicians and paramedics). The working language during the workshop was Portuguese, with simultaneous translations in English for all the sessions (lectures, discussions, hands on skills and e-learning).

7.1 Lectures and presentations
The topics covered in lectures addressed team responsibility and organization of health care facilities; patient safety; disaster planning, appropriate use of oxygen; management of bleeding; eclampsia, burns, trauma; basic anaesthetic and resuscitation techniques; prevention of nosocomial HIV transmission; sterilization of equipment; waste disposal; hygiene; record keeping, monitoring and evaluation on quality of care, preoperative checklists to assure that the Right Patient gets the Right Surgery on the Right Side at the Right Time, by the Rightly Trained Health Personnel.

7.2 'Hands-on' training in hospital
The 'hands on skill' training sessions were conducted at the Maputo Central Hospital using standard WHO best practice protocols for Clinical Procedures Safety. The participants were trained in the management of trauma, prevention of HIV transmission, disaster planning, basic life support, Oxygen and anaesthetic equipment, hand hygiene, transportation of the critically ill, stabilisation of fractures, first aid, basic life support, safety of anaesthesia techniques, universal precautions and prevention of HIV transmission using blood conservation with anaesthetic and surgical techniques, treatment of anaemia. Participants visited Mavalane hospital, for discussion and training with
doctors, anaesthetist and nurses in emergency and operation rooms, postoperative wards, sterilization of equipment, oxygen, basic monitoring, intravenous fluid therapy, and waste disposal.

7.3 Discussions
This workshop brought collaborators with activities in common cross cutting issues with Making Pregnancy safer, HIV, Violence and injury programs and strengthening essential and pre hospital trauma care systems. The relevance of the 3 MDGs in this integrated approach was explained, by Dr Carbonell.

Discussions included the following issues: Maternal mortality and under-five child mortality are high especially in rural areas of Mozambique and injuries caused by road traffic accidents; burns, disasters and falls from trees are common causes of morbidity and mortality. There are also lack of health personal and capacity in management of emergencies. Non-specialist health personnel with inadequate pre-service training mostly perform the emergency and essential surgical procedures for life threatening conditions at rural health care facilities which often lack basic essential equipments. The referral systems are also not in place due to above factors and geographical settings.

Using the WHO/EHT/CPR Basic Operational Framework (www.who.int/surgery), the following gaps were identified:
- Lack of information on policy, standards of care, minimum supplies and essential equipments, referral systems and skills of health care workers to perform emergency and essential surgical procedures, including prevention of HIV transmission in these clinical procedures.
- Lack of mechanisms for coordination of various stakeholders to mobilize resources and implement a plan of action to improve essential services effectively
- Lack of appropriate and user friendly training materials for the needs of Mozambique
- Lack of technical and financial resources for implementation and evaluation of a plan of action to improve emergency and essential surgical care.
- Lack of adequate skills of health professionals on current and safe use of surgical procedures and equipment.
- Lack of proper monitoring and evaluation of outcomes of service and care that are now starting by the national group of quality within the MoH.

In the MoH one of the priority areas is to strengthen the primary health care services so that the health status of majority of people, in particular women and children who live in rural areas is improved. To this effect, a minimum package of essential health services and standards are being developed. These minimum services and standards will be the basis of health service provision through the health facilities and capacity building of healthcare workers towards achieving MDGs. Such training workshops as this would strengthen the primary health care services. Human Resources are being re-orientated through pre and ongoing continuing education programmes in order for new policies and guidelines can be effectively implemented. The PCD is also focussing on quality assurance programmes targeting training, teaching institutions and health facilities. A database on human resource profile is created at Directorate of Human Resources, which will be used for needs assessment and planning of future education programmes.

The National Surgical Programme of the MoH in collaboration with the ASEA and the Spanish Society of Surgery has embarked on a postgraduate training programme for surgeons who will incorporate the WHO training manual on Surgical Care at the district hospital and IMEESC training package into their curriculum. They have formed partnership with Department of Training of Human Resource Directorate to expand the programme to other training program.

The essential emergency procedures including planning for disasters and prevention of HIV transmission should be taught to health care workers, towards patient safety at resource limited healthcare facilities. Participants discussed the applicability of the WHO IMEESC as a part of the teaching curriculum for medical and nursing students, non-specialist doctors, nurses, technicians and paramedic staff, trauma, obstetrics, surgery, anaesthesia and emergency services. The Surgical Technicians mentioned that this was the first time after 10 years that they were meeting to discuss the clinical problems they face in their health facilities.

8. Action plan

The following action plan resulted following the discussions to improve the quality of emergency and essential surgical care(Action Plan included in Annex VI).
- Conduct training on Emergency and Essential Surgical Care for service providers (doctors, nurses, surgical and anesthesia technicians;
- Provide access to basic emergency essential equipments, instruments and drugs;
- Implement the WHO best practice intervention protocols and standards on emergency and essential surgical care;
- The WHO training manual “Surgical Care at the District hospital” will be translated into the Mozambique language, printed for strengthening basic skills training at rural hospitals;
- The trainers will organize local trainings for each of the identified health facilities in 10 provinces using the WHO IMEESC training tools;
- The WHO manual “Surgical Care at the District Hospital” will be the key training material with the following tools to be adapted and translated to improve emergency and essential surgical skills of health personnel:
  - WHO Integrated Management Package for Emergency & Essential Surgical Care E-learning tools
  - WHO Best Practice Protocols for Clinical Procedures Safety
  - WHO Guidelines for Emergency Surgical Care in Disaster Situations
  - WHO generic list of Essential Emergency Equipment for resuscitation
  - WHO Needs Assessment for Monitoring and Evaluation
  - WHO Management of Complication in Pregnancy and Delivery
  - WHO Essential Trauma Care Guidelines

9. Recommendations

On the concluding day of the workshop the following recommendations were made. The planning and implementation of the following broad activities will fulfil the gaps in requirements of the WHO/EHT/CPR basic operational framework (www.who.int/surgery):

- A situation analysis of the current practices and gaps in the selected hospitals namely Angonia, Xinavane and Marromeu Rural Hospitals. The analysis will cover areas such as existence of policy and guidelines on emergency and surgical care; availability of basic essential equipments, drugs and supplies; assessment of the number and skills of health care workers; inpatient and outpatient morbidity and mortality statistics; and systems of referral for emergency and surgical cases that can not be dealt at primary health care level. The WHO guidelines and checklist and assessment form could be adapted and used for this exercise.

- The Multidisciplinary Group should be involved in:
  - Planning and implementation of a plan of action based on findings from the assessment.
  - The expansion of the group and defining its terms of reference.
  - The WHO training tools specifically the training manual on Surgical Care at District level will be adapted and printed into Portuguese edition.
- With support from WHO and other international organizations and in close collaboration with national resource personnel especially from the MAD, and National Surgical Programme, training programmes will be conducted for health care workers from Angonia and Marromeu and Xinavane Rural Hospitals and expanded to include all provinces.
- A monitoring and evaluation framework will be put in place to measure the impact of this programme.

**Participants to** share the workshop report with the recommendations to sensitize professional associations and scientific society, Education and training institutions/libraries, NGOs and other relevant organizations, and Potential funding agencies. They should:
- Act as focal points and facilitators in organizing training workshops to promote emergency and essential surgical care for health personnel for primary health facilities.
- Facilitate the dissemination of recommendations and WHO learning materials, on essential surgical care, in conjunction with appropriate institutions and organizations.
- Assist in the establishment of a system for the monitoring and evaluation of emergency and essential surgical care.

**Partnerships** are essential in supporting national initiatives to promote essential emergency and surgical care through training and education of health personnel in the prevention of HIV transmission and other infectious agents through:
- Implementation of best practice guidelines and education
- Training in the use of universal precautions and reduce unnecessary blood transfusions in emergency and essential surgical procedures through the following:
  - reducing blood loss using surgical and anaesthetic techniques
  - assessment and treatment of anaemia
  - use of intravenous fluids and appropriate drugs

**MoH and national health authorities with WHO** should:
- Support the implementation of national policies, guidelines and plans to link the Essential Emergency and Surgical care projects with trauma, emergencies and disaster planning, HIV, maternal and child health projects.
- Promote the integration of essential emergency and surgical care services into undergraduate and postgraduate programmes in medical, nursing and paramedical schools.
- Establish and promote education and training in emergency procedures and equipment for surgery, obstetrics and anaesthesia.
- Make WHO training manual ‘Surgical Care at the District Hospital’ and other training materials adapted to needs of Mozambique to facilitate their wider use.

- Support involvement of professional associations in promoting essential surgical skills.

- Plan and implement follow-up activities.

- Support research on outcome and public health impact of emergency and essential surgical care.

10. Evaluation and Follow Up

The aim of this evaluation was to learn from the participants if such a model of integrated basic skills in cross-cutting themes applicable to all priority areas of patient care and policies, was applicable for training health providers at resource-limited health care facilities. The participants were trained to become trainers in building capacity through implementation of the WHO IMEESC tool in their education programme in medical and nursing schools, training programmes in surgery, trauma, obstetrics, anaesthesia, disaster and emergencies.

At the end of the training workshop an evaluation was done, using the WHO training workshop evaluation tool. The participant scored their opinion and gave comments on the training contents, presentations, training tools (training manual Surgical Care at the District Hospital, IMEESC e-learning tools, best practice protocols on Clinical Procedures Safety, WHO generic list of Essential Emergency Equipment for Resuscitation), duration and their confidence to teach basic skills following this training workshop. The average mean score was 4 on a scale of 1 to 5.

A decision was made that monitoring and evaluation to assess the impact of the trainers workshop for each of the 10 provinces will be organised by the 'Multidisciplinary Working Group', 6 months following this training workshop, using the WHO needs assessment tools.

11. Conclusions

In the closing session, Professor Fernando Vaz, (Director, Surgical Technicians Training Program) was very pleased that WHO has now addressed the need for training surgical technicians as they were the front line health providers managing surgical interventions in acute infections, trauma, pregnancy-related complications, in difficult situations at rural health facilities. Mozambique MoH was the first to start the course for surgical technicians (technicos chirugie) to solve the problem of brain drain to urban settings. The introduction of a WHO IMEESC toolkit was very timely in guiding a comprehensive integration of the training curriculum for doctors, nurses and technicians.

Participants were given certificates by the MoH. The important role of WHO in partnership with ministries of health, local and international organization, professional societies and institutions in addressing the need to strengthen collaboration in training in essential emergency and surgical care at resource-limited healthcare facilities was acknowledged.
12. Acknowledgements to collaborations and support

- Ministry of Health, Mozambique
- Department of National Surgery Program, MoH, Mozambique
- Spanish Inter-hospital Cooperation
- Association East African Surgeons
- Association of Anaesthetist Mozambique
- Faculty of Medicine, University of Eduardo Mondlane
- Maputo Central Hospital
- Mavalane General Hospital
- World Bank Mozambique
- WHO, Mozambique, WHO/ AFRO
- Departments of Essential Health Technologies, Making Pregnancy Safer, Violence & Injury Prevention, Patient Safety/Evidence & Information for Policy, WHO, Geneva; Switzerland,

13. Annexes

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Annexe 1

Participants List on the WHO Workshop on Emergency and Essential Surgical Care at District/Rural Hospitals (CRDS. Maputo 12 -16 September 2005)

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Annexe 2

WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTE

WHO training workshop with Ministry of Health on
Strengthening Emergency and Essential Surgical Procedures with linked Equipment

Maputo, Mozambique, 12-16 September 2005

Programme Agenda

Day 1 (Planning Meeting) 12 September 2005

- Meeting of facilitators (teaching faculty, MOH and WHO, country office)
- Presentations
- Discussions
- Plan Working Groups for visit and training at the hospital venue and follow up activities
- Setting up the workshop training activities
- Project plans for integration and links with trauma, obstetrics, anesthesia, emergencies, disasters, HIV training programs

Day 2 Training session 13 September 2005

1. Opening session
   - Registration
   - Welcome and introduction (MoH), Dr Saide
   - Opening remarks (MoH), Dr Hassan
   - Workshop objectives (MoH) Dr. Mujovo
   - WHO Emergency and Essential Surgical Care project (WHO, Geneva) Dr Meena N. Cherian

1. WHO "Integrated Management for Essential and Emergency Surgical Care (IMEESC) toolkit (WHO, Geneva)
   - Role of the health providers & policy makers in meeting the requirements for appropriate Emergency and Essential Surgical Care at first referral level health facilities
   - Policies and recommendations for minimum basic requirements to improve Emergency Essential Surgical Care at resource limited healthcare facilities

2. Situation Analysis and needs assessment in three selected rural hospitals: Marromeu, Angonia and Xinavane (participants from rural hospitals).

4. Overview of Emergency and Essential Surgical Care (trauma, obstetrics, anaesthesia) in Mozambique
Dr F. Vaz, Dr T. Schwalback, Dr J. Langa, Dr Otilia, Dr I. Vaz, Dr Carla Silva

5. Round Table discussions

Chair person: Dr Mujovo

- Gaps in the overall emergency and trauma care current system, data and training particularly in rural hospitals
- Gaps in the education curriculum (doctors, nurses, technicians and paramedics)
- Using the WHO IMEESC e-learning tools in first referral level health facilities, medical and nursing education and training programmes.
- Collaborative approach & integration to emergency procedures in trauma, obstetrics, anaesthesia, infection control (HIV), patient safety at first referral level health facilities
- Evaluation forms for assessment of quality of care at first referral level health facilities

6. Orientation to the training sessions for day 3, 4, 5 (WHO).

7. Summary of Day 2

Day 3 (Training sessions) 14 September 2005

8. Training of trainers to Improve the Quality of Care at rural/district Hospital using WHO training materials on Essential Emergency and Surgical Care:

- Links to training materials (WHO manual Surgical Care at the District Hospital, Trauma and Obstetric Care guidelines) from other WHO departments.
- WHO training manual “Surgical Care at the District Hospital” (Teaching Hospital)
- Policies & recommendations for minimum basic requirements to improve essential surgical care (Aide Memoire on Essential Surgical Care) (MoH)
- Leadership, team skills & management of first referral health care facilities (MoH)
- Planning in trauma and disaster situations (Surgery & Trauma team Teaching Hospital)
- Evaluation and monitoring for improvement in the quality of emergency care: Needs assessment form
- Surgical interventions in Emergency Obstetric Care program Dr Alicia Carbonell (WHO)

Summary day 3

Day 4 (Training sessions and visit to Hospitals) 15 September 2005

9. Patient safety best practice protocol interventions in essential emergency procedures

Chair person: (Teaching hospital)

- Check list for essential emergency equipment (WHO generic EEE list)
- Oxygen use
- Use of surgical and anaesthetic techniques to reduce blood loss
- Preoperative preparation & assessment of co-existing diseases: anaemia, respiratory infections
- Intra-operative and postoperative monitoring
• Care of the unconscious patient
• Infection control and prevention of HIV transmission using surgical and anaesthetic techniques
• Cleaning, sterilization and disinfection
• Waste management
• Record keeping and reporting of errors and adverse events

10. Basic skills training using mannequins
    Dr Rafico and disaster management team
    Dr Mapasse and surgical team
    Dr Farida, anesthesia team

Recommendations for minimum basic requirements to improve emergency and essential surgical care (equipment, drug, team skills)

11. Emergency and Essential Surgical procedures : (teaching & visit to hospital)
    (Surgical and Nursing Education team)
    Basic skills in essential emergency and surgical procedures
    • IV access, maintenance of IV, cut-down, airway maintenance, Basic Life Support, Cardio-Pulmonary Resuscitation
    • Bleeding, wound management, burns, splint and immobilization of fractures:
    • Best practice protocols for Clinical Procedures Safety
    • Universal precautions for prevention of HIV transmission: Best practice protocols
    • Essential Emergency Equipment use and maintenance
    • Transportation of the critically ill: Best practice protocols
    • Hygiene (cleaning, washing of hands, asepsis etc): Best practice protocols

12. Visit to Mavalane hospital
    Dr Anila Hassane

Summary day 4

Day 5 (workshop concluding session) 16 September 2005

Chair person: Dr Mujovo

12. Discussion on follow-up activities

13. Recommendations and Action Plan
    (WHO/MoH)

14. Closing Session
    (MoH,WHO)
### Programme of work

WHO Training Workshop in collaboration with Ministry of Health on Emergency and Essential Surgical Care Procedures with Linked Equipment

**Day 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Section Title</th>
<th>Facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.30 -17.00</td>
<td>Pre Workshop meeting with the participants. Registration and distribution of training material</td>
<td>Dr Mujovo/ Alicia/Kidist</td>
</tr>
</tbody>
</table>

**Day 2**

<table>
<thead>
<tr>
<th>Time</th>
<th>Section Title</th>
<th>Facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 -8.30</td>
<td>Registration</td>
<td>Dr Mujovo</td>
</tr>
<tr>
<td>8.30 – 9.00</td>
<td>Introduction and objectives</td>
<td>Dr Mouzinho Saide – National Health Director</td>
</tr>
<tr>
<td>9.15 - 9.45</td>
<td>Opening Ceremony</td>
<td>Dr Americo Assan</td>
</tr>
<tr>
<td>9.15 - 9.45</td>
<td>Mozambican health net and emergency and surgical Care</td>
<td></td>
</tr>
<tr>
<td>9.45 - 10.00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10.00 – 11.30</td>
<td>Overview of Emergency and trauma care system in Mozambique:</td>
<td>Round table Facilitator: Dr. Mujovo Dr Otilia Neves Dr Momede Rafico Dr José Langa Dr EliasWale Prof Dr Vaz Dr. Joao Carbaleido Dra Farida Urce Dr Frederico Fortes Dr Jotamo Comé Luis Comissário Dr Alicia Carbonelli Dr Kidist Bartolomeos</td>
</tr>
<tr>
<td></td>
<td>From the practitioner’s perspective, what are the gaps in the overall current system of emergency care?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do we have the data to describe the need, i.e. type of emergencies seen, by age/sex, severity, types of procedures and treatments provided, on patient outcome etc.. if so where are the data gaps, how to improve it,?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suggestions for improvement. Other initiatives around this area?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aroudn training: what are the gaps? Recommendations??</td>
<td></td>
</tr>
<tr>
<td>11.30 – 12.30</td>
<td>Integrated Management for Essential and Surgical Emergency Care at first referral healthcare facilities: Introduction to WHO recommendations and related</td>
<td>WHO (Dr Meena CHERIAN)</td>
</tr>
<tr>
<td>Time</td>
<td>Section Title</td>
<td>Faculty Allocation</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>Day 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.00 – 10.00</td>
<td>Policy &amp; Recommendation for minimum basic requirements to improve Essential Surgical Care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Organization and management of the district hospital: Leadership, team skills &amp; management of first referral health care facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Triaging</td>
<td>Dr Meena</td>
</tr>
<tr>
<td></td>
<td>- Organizing the referral system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Patient transport</td>
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</tr>
<tr>
<td></td>
<td>- Video show and discution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skills on airways management with cervical protection</td>
<td>Dr Farida</td>
</tr>
<tr>
<td>17:00 – 17:15</td>
<td>Conclusions</td>
<td>Dr Meena/Dr Mujovo</td>
</tr>
</tbody>
</table>

**Patient safety best practice protocols interventions in essential emergency and surgical procedures**

<table>
<thead>
<tr>
<th>Time</th>
<th>Section Title</th>
<th>Faculty Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 10:00</td>
<td>Teaching &amp; visit to hospital (HCM)</td>
<td>Dr Meena</td>
</tr>
<tr>
<td></td>
<td>- how to use the check list for essential emergency equipment (WHO list)</td>
<td>Dr Atilio</td>
</tr>
<tr>
<td></td>
<td>- Preoperative preparation and assessment of co – existing diseases: anemia, respiratory infections</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Intra - operative and post - operative monitoring</td>
<td>Dr Mapasse</td>
</tr>
<tr>
<td></td>
<td>- Care of the unconscious patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Thorax truma</td>
<td></td>
</tr>
</tbody>
</table>
### Shock

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 -10:20</td>
<td>Tea break</td>
<td></td>
</tr>
<tr>
<td>10:20 -12:30</td>
<td>Planning in trauma and disaster situation</td>
<td>Dr Rafico</td>
</tr>
<tr>
<td>12:30 -13:30</td>
<td>Lunch</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
</table>
| 14.00 - 1700  | Skills on Airways with Cervical spine protection and Breathing management for all ages  
|               | a) Infant                                     | Dra Farida    |
|               | b) Child                                      | Dr Mujovo     |
|               | c) Adult                                      | Dr Rafico     |
|               | d) Skills on treatment of shock               | Dr Mapasse    |
|               | e) Log Rool                                   | Dr Atilio     |
|               | f) Transportation                             | Mr Comissário |
|               | g) Skills on thorax drains insertion          | Dra Meena     |
| 17:00 – 17:15 | Conclusions                                   | Dr Meena/Dr  |
|               |                                              | Mujovo        |

### Day 5

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.00 10.00</td>
<td>Visit to Mavalane General Hospital Next steps</td>
<td>Dr Meena/Dr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mujovo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dra Alicia/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dra Kidist</td>
</tr>
<tr>
<td>11.00</td>
<td>Closing</td>
<td>Prof. Dr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vaz(Representing the Ministry of health)</td>
</tr>
</tbody>
</table>
Ficha de

Avaliação das necessidades para unidades sanitárias com recursos limitados

Equipamento essencial das emergências na sala de urgências*
*Qualquer sala que serve de ponto de entrada tal como:
Banco de Socorros/ Sala das urgências / sala de Tratamento/ sala ocasional

1. Nome e Localização da Unidade Sanitária

2. Tipo de unidade (favor selecione somente um)
   - Unidade Sanitária do primeiro nível de referencia/
     o Hospital Distrital □ Hospital Rural □ Hospital Geral □
     o Centro de Saúde □

3. Recursos Humanos na sala de urgências/ banco de socorros (favor indicar o numero do
   pessoal de saúde efectivo)
   - Médicos
   - Enfermeiros(as)
   - Técnicos
   - Pessoal paramédico

4. Recursos físicos
   (a) Infraestrutura

<table>
<thead>
<tr>
<th></th>
<th>Sim</th>
<th>Não</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existe um local ou sala própria para os cuidados de emergências?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Tem água corrente?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Se sim: Irregular / Constante (marque com um círculo)</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Tem electricidade?</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Se sim: Irregular - Constante (marque com um círculo)</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

   (b) Equipamento
   Está disponível a lista do equipamento essencial para os cuidados de emergências- urgências?
   O seguinte equipamento esta disponível
   - Balão de oxigénio:
     De maneira Regular Irregular (marque com um círculo)
   - Regulador de oxigénio
   - Outro equipamento para administração de oxigénio
     (tubos, mascaras, etc)
### Equipamento Essencial das Emergências (EE)

<table>
<thead>
<tr>
<th>Questão</th>
<th>Sim, algum equipamento</th>
<th>Sim, todo o equipamento</th>
<th>Não</th>
</tr>
</thead>
<tbody>
<tr>
<td>O equipamento está em bom estado e em funcionamento?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A US tem facilidade para reparar o equipamento se este avariar?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pode ser reparado dentro da própria unidade sanitária?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tem acesso a reparação fora da unidade sanitária?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Se sim, qual é a distância até o local de reparação (em km): 1-25 -- 26-50 -- 51-200 -- &gt;200 (marque com um círculo)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existe alguma acordo com os fornecedores para a manutenção dos equipamentos?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O pessoal de saúde que trabalha na sala de urgências recebe treinos sobre como utilizar o equipamento para as urgências?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existe informação disponível sobre o fornecimento, reparação e peças sobresselentes dos equipamentos?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5. Qualidade, segurança, acesso e utilização

<table>
<thead>
<tr>
<th>Questão</th>
<th>Sim, para alguns procedimentos</th>
<th>Sim, para todos os procedimentos</th>
<th>Não</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estão disponíveis protocolos sobre os procedimentos essenciais das emergências?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estão disponíveis protocolos sobre a utilização adequada e segura do equipamento nos procedimentos essenciais das emergências?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com que frequência se realizam supervisões (sala por sala) que garantem que o equipamento e outros materiais requeridos para os procedimentos essenciais das emergências estão disponíveis e em bom funcionamento? (marque com um círculo)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diariamente --- semanalmente --- mensal --- duas vezes por ano --- anualmente --- Uma vez em _____ anos --- nunca</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No banco de socorros estão disponíveis materiais de informação, educação e treinos sobre procedimentos e o equipamentos de emergências para que o pessoal de saúde que presta estes cuidados possam utilizá-los quando necessário?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existe algum novo procedimento novo/intervenção relacionada com esta área?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Se sim, qual procedimento/intervenção: ________________________________ (favor de especificar)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Há indicação de que as referencias para outras unidades sanitárias diminuiu devido a habilidades e conhecimentos dos procedimentos e intervenções?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existem registros das emergências?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Política

<table>
<thead>
<tr>
<th>Item</th>
<th>Sim</th>
<th>Não</th>
<th>Desconhece</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existe uma política que promova o treino dos provedores de saúde sobre a gestão das emergências por trauma e dos cuidados obstétricos, e de anestesia?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Ao nível local</td>
<td>Ao nível provincial</td>
<td>Ao nível nacional (favor apontar qual/ quais)</td>
<td></td>
</tr>
<tr>
<td>Existe alguma norma para actualizar os protocolos para o manejo das emergências por trauma e cuidados obstétricos adaptados às necessidades locais?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Existe alguma orientação sobre a doação, procura e manutenção do todo o equipamento essencial das emergências?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Existe uma lista do pessoal extra a ser contactado em caso de situação de desastres?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
**Avaliação do Workshop Pelos Participantes**

A sua opinião é altamente valorizada, e a sua avaliação e comentários nos permitem ter a oportunidade de melhorar os nossos *workshops* de formação. obrigado

<table>
<thead>
<tr>
<th><strong>Tema, data e local:</strong> Essential Emergency Clinical Procedures training workshop.</th>
<th><strong>Pontuação</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Por favor, dê uma pontuação (com um círculo) para dizer se está de acordo ou não com as afirmações abaixo, conforme se segue:</strong> Concordo Plenamente..5…4…3…2…1..Disordo Plenamente</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>1. As minhas expectativas em relação à formação foram satisfeitas</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. O conteúdo do workshop e a apresentação do material de formação foram bem explicados</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> específico que tópicos precisam de mais explicação:</td>
<td></td>
</tr>
<tr>
<td><strong>3. Os materiais de referência básicos, e o material de formação da OMS 'Cuidados Cirúrgicos a Nível do Hospital Rural/Distrital' são úteis como instrumento de ensino/formação</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>4. Os instrumentos de Aprendizagem electrónica apresentados foram úteis</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis:</td>
<td></td>
</tr>
<tr>
<td><strong>5. Os instrumentos de Aprendizagem electrónica serão usados como materiais de referência para dar formação na unidade sanitária onde trabalho</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis: Especifique que tópicos devem ser acrescentados:</td>
<td></td>
</tr>
<tr>
<td><strong>6. Os protocolos são úteis para a implementação de melhores práticas na unidade sanitária onde trabalho</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis: Especifique que tópicos devem ser acrescentados:</td>
<td></td>
</tr>
<tr>
<td><strong>7. Os conteúdos da formação são úteis</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis: Especifique que tópicos devem ser acrescentados:</td>
<td></td>
</tr>
<tr>
<td><strong>8. A formação através de video-conferência foi útil</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis: Especifique que tópicos devem ser acrescentados:</td>
<td></td>
</tr>
<tr>
<td><strong>9. A Duração do workshop foi adequada</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> a duração deveria ser mais longa/mais curta</td>
<td></td>
</tr>
<tr>
<td><strong>10. Sinto-me confiante para dar formação, na minha unidade sanitária, sobre as técnicas básicas aprendidas no workshop</strong></td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td><strong>Comentários:</strong> Especifique que tópicos que não foram úteis: Especifique que tópicos devem ser acrescentados:</td>
<td></td>
</tr>
</tbody>
</table>
Annexe 6

Reference Materials

Working tool for improving emergency and essential surgical Skills of Health Personnel at rural hospitals

1. Main objectives for training:
2. Main topics to be covered:
3. Venue and Dates:
4. Who will be responsible for organizing the training:
5. Who will be the participants (number and designation):
6. Who will be the resource personnel (number and designation):
7. What WHO training materials will be required:
8. Tentative budget:
9. Possible source of funding:

1. Work sheet for improving information systems

<table>
<thead>
<tr>
<th>What record keeping is currently in existence</th>
<th>What improvement is needed?</th>
<th>Who will be responsible?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Work Sheet for Improving Physical structure with essential equipment

<table>
<thead>
<tr>
<th>What is currently lacking in terms of essential infrastructure and equipments?</th>
<th>What is the estimated cost?</th>
<th>What are the possible sources for funding?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>

3. Work sheet for resource mobilization

<table>
<thead>
<tr>
<th>Who are the current partners in emergency and surgical care?</th>
<th>Suggested New Partners?</th>
<th>Area of support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Situation Analysis of Health Facilities Needs Assessment

<table>
<thead>
<tr>
<th>Province</th>
<th>Unit</th>
<th>Scheduled Surgeries per Week</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sofala</td>
<td>rural</td>
<td>16 4 90 1 1 104</td>
<td></td>
</tr>
<tr>
<td>Manica</td>
<td>rural</td>
<td>8 4 10 3 1 87</td>
<td></td>
</tr>
<tr>
<td>Zambeiza</td>
<td>rural</td>
<td>8 12 4 2 60</td>
<td></td>
</tr>
<tr>
<td>Tete</td>
<td></td>
<td>6 10 5 1 78</td>
<td></td>
</tr>
<tr>
<td>Gaza</td>
<td></td>
<td>8 8 12 4 1 200</td>
<td></td>
</tr>
<tr>
<td>Maputo</td>
<td>General</td>
<td>20 72 16 18</td>
<td></td>
</tr>
<tr>
<td>Maputo</td>
<td>General</td>
<td>19 38 14</td>
<td></td>
</tr>
<tr>
<td>Inhambane</td>
<td></td>
<td>20 760 50 10 3</td>
<td>Scheduled surgeries include Obstetrics and surgery. 2 surgery technicians available</td>
</tr>
<tr>
<td>Maputo</td>
<td>rural</td>
<td>4 8 60 2 64</td>
<td></td>
</tr>
<tr>
<td>Niassa</td>
<td>rural</td>
<td>18 7 52 12 2 84</td>
<td></td>
</tr>
</tbody>
</table>
### National plan

|---------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lack of trained staff                | Training in Integrated Management of Emergency and Essential Surgical Care (trauma, pregnancy-related complications and anaesthesia) | 1. Compilation and translation of WHO training materials for follow-up in provinces  
                                        |                                                                            | 2. Organize training in provinces                                                   |
| Lack of equipment and resources      | Availability of minimum basic functioning equipment                       | Assessment using WHO generic list of essential equipment                             |
| Safety                               | Ensure patient safety at all levels                                        | 1. Training of staff on Universal precautions  
                                        |                                                                            | 2. Include assessment of safety equipment in hospitals                              |
| Policy                               | National policy and plan on emergency care including master disaster       | 1. Working group to develop a draft national policy  
                                        |                                                                            | 2. Review existing disaster plan                                                    |
| Coordination                         | Strengthen collaboration between different programmes within MoH and with other sectors dealing with emergencies | 1. Formulation of Multidisciplinary Working Group within the MoH  
                                        |                                                                            | 2. Initiate discussion with other sectors                                            |
| Monitoring and Evaluation            | Routine surveillance and documentation of patient care for evidence-based planning | 1. Expansion of trauma surveillance in emergency room to include all emergencies  
                                        |                                                                            | 2. Review existing patients documentation form                                       |
### Questões

| Falta de pessoal treinado | Treino Integrado no manejo das emergências e cuidados cirúrgicos (trauma, complicações da gravidez e anestesia) | 1.1 Recolha e tradução dos materiais de treino da OMS para seguimento nas províncias  
1.2. Organizar treinos nas províncias sobre emergências e cuidados cirúrgicos |
| Falta de equipamento e de recursos | Disponibilidade de equipamento mínimo básico e de resuscitação | Avaliação utilizando a lista genérica dos medicamentos essenciais para as emergências da OMS  
2. Verificar no economato provincial o material existente |
| Pessoal bem treinado no uso e manutenção rotineira do equipamento | | Mobilizar recursos para a colocação do equipamento básico  
3. Treinar o pessoal no uso de equipamento |
| Biosegurança | Garantir a segurança do paciente e do trabalhador de saúde a todos os níveis | 1. Treinar ao pessoal de saúde nas precauções universais  
2. Incluir a avaliação das necessidades da utilização e segurança do equipamento nos hospitais |
| **Políticas** | Política nacional e plano de ação sobre os cuidados de emergências incluindo desastres | 1. Criar um grupo de trabalho para desenvolver um draft da política nacional de emergência e cuidados cirúrgicos essenciais nos hospitais  
2. Revisão ou elaboração dos planos sobre desastres |
| **Coordenação** | Fortalecer a colaboração entre os diferentes programas dentro do MISAU e com outros sectores trabalhando nas emergências | 1. Criar um grupo de trabalho para multidisciplinar dentro do MISAU  
2. Iniciar as discussões com outros sectores  
3. Mobilizar apoios os g programas a vários níveis |
| **Monitoria e Avaliação** | Vigilância de rotina e registro dos cuidados do paciente para planificar com base nas evidências | 1. Expandir a vigilância do trauma nas salas de emergências para incluir todas as emergências registradas dentro de uma US  
2. Revisar os registros de pacientes existentes  
3. Rer as intervenções cirúrgicas de emergências nos hospitais provinciais e rurais |
Esta lista para checar o equipamento essencial para a resuscitação descreve os requerimentos mínimos dos cuidados cirúrgicos essenciais das emergências no primeiro nível de referencia (hospitais rurais / centrso de saude)

<table>
<thead>
<tr>
<th>Equipamento e Material indispensável</th>
<th>Quantidade</th>
<th>Chequeado em (data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambu (adulto)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambu (pediátrico)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fonte de oxigênio (balão ou regulador)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mascara e Tubos para fornecimento de oxigênio</td>
<td></td>
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</tr>
<tr>
<td>Fonte luminosa para garantir a visibilidade (lampada e/ou lanterna)</td>
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<td></td>
</tr>
<tr>
<td>Estetoscopio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bomba de sucção (vacum -manual ou eléctrico)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esfigmomanômetro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Termômetro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabo de Bisturi # 3 com lâmina #10,11,15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabo bisturi # 4 com lâmina #22</td>
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</tr>
<tr>
<td>Tesoura de ponta recta 12 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tesoura de ponta romba 14 cm</td>
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<td></td>
</tr>
<tr>
<td>Cânula de Gedel (para adultos)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cânula de Gedel (para crianças)</td>
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<tr>
<td>Pinça de Kelly12-14 cm</td>
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<tr>
<td>Pinça hemostáticas</td>
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<tr>
<td>Covete de acinox px. 26x14 cm</td>
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</tr>
<tr>
<td>Garrote</td>
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<tr>
<td>Portagulhas</td>
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<tr>
<td>Toalha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balde de lixo com saco plástico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esterilizador</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escova para lavas as mãos</td>
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<td></td>
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<tr>
<td>Espéculo vaginal</td>
<td></td>
<td></td>
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<tr>
<td>Balde plástico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panelas de esterilização</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesa para exame médico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lavatório</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Items renováveis**

<p>| Cateter de sucção tamanho 16 FG                                            |            |                     |
| Depressor de língua de madeira (descartável)                              |            |                     |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonda nasogástrica 10 para 16 FG</td>
<td></td>
</tr>
<tr>
<td>pilhas para lanterna</td>
<td></td>
</tr>
<tr>
<td>Kit de infusão intravenosa</td>
<td></td>
</tr>
<tr>
<td>Cateter intravenoso # 18, 22, 24</td>
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<tr>
<td>epicraneanas # 21, 25</td>
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<tr>
<td>Seringas 2ml</td>
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<tr>
<td>Seringas 10 ml</td>
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<tr>
<td>Agulhas descartáveis # 25, 21, 19</td>
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<tr>
<td>Recipiente para deltar objectos cortantes</td>
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</tr>
<tr>
<td>Garrafa com tampa para soluções a base de álcool</td>
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</tr>
<tr>
<td>Gaze esterilizada</td>
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<tr>
<td>Compressas esterilizadas</td>
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</tr>
<tr>
<td>Adesivo</td>
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</tr>
<tr>
<td>Agulhas de sutura, com fio e sem</td>
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<tr>
<td>Fio de sutura adsorvivel</td>
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</tr>
<tr>
<td>Tala para braço e perna</td>
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<tr>
<td>Algália descartável #12, 14, 18 com saco</td>
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<tr>
<td>Algodão</td>
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</tr>
<tr>
<td>Resguardo plástico 90 x 180 cm</td>
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</tr>
<tr>
<td>Luvas esterilizáveis) tamanhos 6, 7 e 8</td>
<td></td>
</tr>
<tr>
<td>Luvas (examinar) todas os tamanhos pequeno, medo e grando</td>
<td></td>
</tr>
<tr>
<td>Mascaras para cobrir o nariz/boca</td>
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</tr>
<tr>
<td>Oculos protectores</td>
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<tr>
<td>Avental plástico reutilizável</td>
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</tr>
<tr>
<td>Sabão</td>
<td></td>
</tr>
<tr>
<td>Lista do material inventariado e outros materiais</td>
<td></td>
</tr>
<tr>
<td>Guiões das práticas para os cuidados de emergências</td>
<td></td>
</tr>
<tr>
<td><strong>Equipamento suplementar a ser utilizado por pessoal de saúde habilitado</strong></td>
<td></td>
</tr>
<tr>
<td>1 Laringoscopio manual</td>
<td></td>
</tr>
<tr>
<td>2 Láminas do laringoscopio de Macintosh (adultos)</td>
<td></td>
</tr>
<tr>
<td>3 Laminas de Laringoscopio do Macintosh (pediátrico)</td>
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</tr>
<tr>
<td>4 Saco para infusaso IV</td>
<td></td>
</tr>
<tr>
<td>5 Pinça de Magills (adulto)</td>
<td></td>
</tr>
<tr>
<td>6 Pinça de Magills (pediátrico)</td>
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</tr>
<tr>
<td>7 Stylet for Intubation</td>
<td></td>
</tr>
<tr>
<td>8 Lampadas e pilhas para o laringoscopio</td>
<td></td>
</tr>
<tr>
<td>9 Tubos endotraquiais cuffed (# 5.5 to 9)</td>
<td></td>
</tr>
<tr>
<td>10 Tubo endotraqueal uncuffed (# 3.0 to 5.0)</td>
<td></td>
</tr>
<tr>
<td>11 Tubos para drenagem torácica</td>
<td></td>
</tr>
<tr>
<td>12 Cricotiroidectomy</td>
<td></td>
</tr>
</tbody>
</table>

*Esta lista foi compilada das seguintes fontes da OMS*

*WHO training manual: Surgical Care at the District Hospital*
WHO Emergency Relief Items, Compendium of Basic Specifications
WHO/UNFPA Essential drugs and other commodities for reproductive health services.
WHO Essential Trauma Care Guidelines

* For specifications refer to this book

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