Facilitators Report

Joint WHO Meetings with Ministry of Health on Strengthening Emergency and Essential Surgical Care in Nepal

9-12 November, 2004
Kathmandu, Nepal
<table>
<thead>
<tr>
<th>Contents</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Executive Summary</td>
<td>3</td>
</tr>
<tr>
<td>2. Background</td>
<td>4</td>
</tr>
<tr>
<td>3. Objectives</td>
<td>4</td>
</tr>
<tr>
<td>4. Field visits to health facilities</td>
<td>5</td>
</tr>
<tr>
<td>5. WHO meeting for facilitators</td>
<td>5</td>
</tr>
<tr>
<td>6. Discussions</td>
<td>5</td>
</tr>
<tr>
<td>7. Recommendations and Action Plan</td>
<td>5</td>
</tr>
<tr>
<td>8. Conclusions</td>
<td>6</td>
</tr>
<tr>
<td>9. Acknowledgements</td>
<td>6</td>
</tr>
<tr>
<td>10. Annexes</td>
<td>6</td>
</tr>
</tbody>
</table>

**Annexe 1:** Participants list  
**Annexe 2:** Program Agenda  
**Annexe 3:** WHO training tools for improving skills of health personnel  
1. Executive summary

Joint WHO with Ministry of Health (MoH) meetings were held in Kathmandu for collaborating trainings for strengthening capacities of health personnel on Emergency and Essential Surgical Care (EESC) at resource limited health facilities and introduce the use of WHO IMEESC toolkit in the training courses in surgery, trauma and anaesthesia towards a standard training.

This was followed by meetings with members of the professional societies and universities for implementation of best practice protocols in the training programmes on surgery, trauma, emergency, obstetrics, anaesthesia and HIV, and transplantation programme in Nepal. There were 50 participants representing policy makers from MoH and health providers (directors from district, zonal and regional and teaching hospitals, medical and nursing school, surgeons, directors of emergency and disaster management, nursing, medical laboratory and quality assurance departments, obstetricians and anaesthesiologists). The WHO project on EESC was introduced and discussions were held with the purpose of identifying target audience, logistics and planning of Training of Trainers (TOT) workshop in 2005. Meetings were held with focal persons in the MoH, and with directors of international partners representing Japan International Cooperation Agency (JICA), German Development Cooperation (GTZ), World Bank and Medicins Sans Frontier (MSF) for collaborations on building capacities.

Field visits were undertaken to rural healthcare facilities (district hospital and primary health care centres) and tertiary hospital. The meetings held with directors of departments of surgery, neurosurgery, trauma, emergency care, anaesthesia, laboratory and nursing. Participants of the meeting included the 'Renal Transplant committee' established at Bir Hospital, which will be the first Government Hospital to start a renal transplant programme in Nepal.

Discussions were held on the existing Medical General Practitioners programme (MDGP) in Nepal which includes anaesthesia training for general practitioners and health workers from district hospitals. The utility of WHO Integrated Management of Emergency and Essential Surgical Care (IMEESC) training toolkit was demonstrated to anaesthesiologists, surgeons and nurses for incorporation in hospital training programme and medical education.

The meeting led to a consensus by MoH and WHO country office for planning a needs assessment and training of health personnel in emergency and essential surgical and anaesthesia procedures with linked equipment towards reducing death and disability in trauma, disaster, pregnancy related complications particularly in women and children.
2. Background

Nepal is a landlocked Himalayan Kingdom with a total population of 27,133,000. The infectious diseases, maternal and perinatal disorders, and nutritional deficiencies are responsible for more than two thirds of the disease burden (68%) in Nepal. Degenerative and noncommunicable diseases contributed to about a fifth of the estimated burden (23%), and injuries and accidents contributed the remaining (9%). In addition there are important newly emerging and re-emerging diseases: malaria, kala-azar, Japanese encephalitis, tuberculosis and HIV/AIDS. The highest risk groups are children under five, particularly females, and women of reproductive age. In case of adult males (15-44 years), tuberculosis, accidental falls, ARI and motor vehicle accidents were the leading causes contributing the burden of disease for that age group. The high burden due to maternal and perinatal disorders emphasizes the need for effective reproductive health programme, especially in the remote areas.

In Nepal the major equity issues relate to gender, age, caste, ethnic group, income and area of residence. Total number of physicians are 5,384 with a density of 0.21 per 1,000 population. The issues which adversely affect the ability for the health sector to effectively address the equity include: inadequate staff motivation; deployment and retention problems; over-centralization and a resulting lack of responsiveness to local needs; inequity in service provision and health outcomes; insufficient community involvement in planning, implementation and supervision of service delivery.

The health policy framework for health sector development set out in the Second Long-term Health Plan (SLTHP). The main policy in the SLTHP focused on the provision of an "Essential Health Care Services Package (EHCP)". This package consists of priority public health measures and essential health care services for the management of common illnesses and injuries.

The current Ninth Medium-term Plan calls for high priority to be given to the availability of the EHCP at the district level and below, and expanding the system of health facilities and strengthening the referral system. Reproductive health and family planning programmes will be strengthened to reduce the maternal and child mortality and morbidity. A master plan covering human resources, equipment, medical instruments will be developed to support the ongoing health programmes. Participation of the private and NGO sectors will be encouraged and mobilized particularly in the provision of specialized services. 1,2

3. Objectives

- Visits to teaching and district hospitals for the proposed surgical training program

---

- Meetings with policy makers, key health providers and stakeholders to support training for strengthening capacities of health personnel on EESC at resource limited health facilities.
- Introduce and facilitate the use of WHO IMEESC toolkit in the training courses in surgery, trauma and anaesthesia towards a standard training
- Collaborating with partners in Nepal for obtaining their support in the training courses on EESC.

4. Field visits for a Situation Analysis

Field visits were made by the team (WHO, WCO, MoH) to the following health facilities:
- National Academy of Medical Sciences (NAMS)
- National Public Health lab (NPHL), Teku
- Patan Hospital (DH),
- Bhaktapur Hospital and Dadikut PHC
- Bir Hospital
- Kanti Children's Hospital, WHO Collaborating Centre for Child Health

5. Meetings at Ministry of Health, Nepal

Meetings were held with focal points in MoH, Dr MK Malla, (Chief specialist, Policy, Planning and International Cooperation Division) and Dr. B.D. Chataut, (Director-General of Health Services).

6. Meetings at the WHO Country Office, Katmandu, Nepal

Meeting was held with Dr Lin Aung, WHO country Office to brief on the field visits and meetings with policy makers, health personals and partners.

7. Meeting discussions

Discussions with policy makers, directors and staff of the health facilities addressed the following issues:

- Access to basic surgical interventions is needed to save lives in many life threatening conditions (injuries, infections, pregnancy related complications, disasters) therefore, gaining attention as a public health issue. WHO is addressing this through the project EESC at resource limited health care facilities.
- The EESC project uses a horizontal approach to improve access to basic care at primary health care facilities.
- Capacity building for the health providers and policy makers by introducing the WHO IMEESC tool kit comprising of comprehensive policy guidelines, needs assessment, essential emergency equipment list, training curriculum, best practices and training videos.
- Incorporation of the WHO IMEESC tool in the wider surgical programs of Nepal for management of trauma, obstetrics emergencies, anesthesia and disasters in medical and nursing schools, and continuing medical education and training programs.
- Experience of the Patan hospital with the existing Medical General Practitioners programme (MDGP) in Nepal which includes anaesthesia training for general
practitioners and health workers from district hospitals will be useful in the proposed trainings.
- The utility of WHO IMEESC training tools was demonstrated and seen as important in policy decisions and day to day practice by anaesthesiologists, surgeons and nurses for eventual incorporation in hospital training programme.

8. Recommendations and action plan

- Preparation of a Joint report of the meetings for dissemination to participants, partners (local and international) including putting on the WHO website.
- Wider dissemination of the WHO training materials and in particular to each of the district and teaching hospitals in the 2 regions identified by MoH and WHO country office.
- Preparation of joint project proposal with WHO country office and MoH for strengthening surgical (including anaesthesia) training in Nepal.
- Collaborations to incorporate the WHO IMEESC toolkit in the surgical and anaesthesia training programs in Nepal.
- Share project plans, WHO IMEESC toolkit with WHO partners in Nepal (JICA, GTZ, DIFD, MSF)
- To establish a "Working Group" for planning training workshops in Nepal

9. Conclusions

This meeting identified the need for the proposed surgical training program and areas requiring strengthening capacities at primary health care facilities for access to basic surgical care. The WHO training materials on emergency and essential surgical procedures and equipment will be incorporated in the training and education programmes in Nepal. GTZ will collaborate for needs assessment and training of trainers programme in Nepal and JICA expressed interest to attend the training workshop in Nepal in 2005.

10. Acknowledgements

- Directors and staff of the Health facilities visited
- MoH, Nepal
- Japan International Cooperation Agency (JICA),
- German Development Cooperation (GTZ),
- Medecins Sans Frontier (MSF)
- WR of WHO Country Office Nepal
- WHO/SEARO
- Departments of Essential Health Technologies, Evidence and Information for Policy (Patient Safety), Making Pregnancy Safer, Violence and Injury Prevention, Child and Adolescent Health, WHO HQ, Geneva, Switzerland
Annexe 1. List of participants of the Meeting

Dr B.D. Chataut,
Director-General of Health Services,
Department of Health Services
Ministry of Health, Nepal

Dr M.K Malla,
Chief specialist,
Policy, Planning & International Cooperation Division,
Ministry of Health, Nepal

Mr Bal Krishna Khukerela
Ministry of Health, Nepal

Dr H.N Acharya
Policy Planning & International Cooperation Division
Ministry of Health, Nepal

Dr Meera Ojha
Sr. Consultant Obstetrician and Gynaecologist
Medicare National Hospital and Research Centre
Nepal

Dr. Chandrika Devi Shrestha
Chief Consultant
Bir Hospital (NAMS)
Nepal

Dr. ML Shreshtha,
Chief Consultant Surgeon,
National Academy of Medical Sciences,
Bir Hospital
Nepal

Dr. Yang, Seung Bong,
General Surgeon,
Patan hospital
Nepal

Dr. Samson Retnaraj,
Chief of Anaesthesia,
Patan Hospital
Nepal

Dr KN Joshi,
Consultant Surgeon & Head of Surgical Discipline
Narayni Sub-Regional Hospital
Nepal

Dr Mark D. Zimmerman,
Medical Director
Patan Hospital

Dr Hom Neupane,
Consultant Physician and Chief of Medicine,
Patan Hospital
Nepal

Dr Seung Bong Yang
General Surgeon
Patan Hospital
Nepal

Dr DP Pokhrel,
Chief Consultant
Medical Superintendent
National Academy of Medical Sciences,
Bir Hospital
Nepal

Ms P Guragain
Advocate
Supreme Court of Nepal
Advisor in Renal Transplant Program
Bir Hospital
Nepal

Dr GR Bajracharya
Chief Consultant Anesthesiologists
Director
Kanti Children’s Hospital
Nepal

Dr RP Chaudhary
Department of surgery
Kanti Children’s Hospital
Nepal

Dr G.P. Ojha
Kanti Children’s Hospital
Director
WHO Collaborating Centre for Child Health
P.O. Box No. 2664
Maharajgunj
Kathmandu
Nepal

Dr Keshori Bajracharya
Obstetrician and Gynaecologist
Maternity Home
Nepal

Dr U.P Devkota
Chief Consultant Neurosurgeon
National Neurosurgical Referral Centre
Bir Hospital
Nepal

Dr I.P Prajapati
Obstetrician and Gynaecologist
Bhaktapur Hospital
Nepal

Dr AD Bhatta
Consultant surgeon urologist
Head Urology Unit
Bir Hospital
Nepal

Dr. Bhakta Raj Dahal,
Nepal

Dr. Ranjan P Singh
Chief Consultant Physician,
Dept. of Medicine
HMG MoH
National Academy of Medical Sciences,
Bir Hospital
Nepal

Dr BD Jha
Department of Anesthesia and Intensive Care
NAMS, Bir Hospital
Nepal

Mr. Kei Umetsu,
Assistant Resident Representative
Health Sector Official,
JICA
Nepal

Mr Jhabindra Bhandari
Programme Officer
JICA, Nepal office

Mr. Clerc Phillipe,
Country Director,
Medecins Sans Frontier
Nepal

Dr Siad fliti
Medical Co-ordinator
Medecins Sans Frontier
Nepal

Mr. Ramji Dhakal,
Deputy Programme Manager,
Health Sector Support programme, GTZ
Nepal

Dr Pitamber Dhungana
Training coordinator
Health sector CoSupport Programme
GTZ
Nepal

Dr Angelika Schrettenbruner,
Director, GTZ
Nepal

WHO

Dr Klaus Wagner,
WHO Representative,
WHO Country Office, Nepal

Dr. Dr Lin Aung,
Health Planner
WHO Country Office, Nepal

Dr Harry Feirman,
Technical officer (health planner),
WHO Country Office, Nepal
Dr Paramita Sudharto,
Public Health Administrator,
WHO Country Office, Nepal

Dr U Tin Shwe,
Short term consultant,
Leprosy elimination,
WHO Country Office, Nepal

Dr Shailash K Upadhayay,
National Liaison Officer,
WHO Country Office, Nepal

Dr Shamsul Huda
Adviser Environmental Health
Ministry of Physical Planning & works
WHO country office Nepal

Dr Meena Nathan Cherian
Project: Emergency & Essential Surgical Care Clinical
Procedures Unit (CPR)
Department of Essential Health Technologies
WHO HQ, Geneva, Switzerland
tel:0041 22 791 4011;
fax: 0041 22 791 4836
cherianm@who.int, www.who.int/surgery
Annex 2: Program Agenda

- Visits to teaching and district hospitals in Nepal for a Situation analysis
- WHO Meetings with directors of teaching and district hospital in Kathmandu regions
- Introduce and facilitate the use of WHO IMEESC tool kit
- Discussions
- Collaborative approach to surgical training on EESC procedures and linked equipment
- Recommendations and follow up action plan
- Conclusions of meetings and visits
Annexe3: WHO training tools for improving skills of health personnel

**Needs Assessment and Evaluation Form for Resource Limited Health Care Facility**

**Essential Emergency Equipment in Emergency Room***

*At an entry point in any health facility such as:

- Emergency room/ Admission room / Treatment room/ Casualty room

1. **Name/Address of Health Care Facility**

   **Country**

2. **Type of Health Care Facility** (please check one)
   - Primary or First referral level facility/ District Hospital/Rural Hospital
   - Health Centre

3. **Human Resources** in emergency room (please indicate number of health staff)
   - Doctors ___ Nurses ___ Clinical or Health officers ___ Technicians ___ Paramedical staff ___

4. **Physical Resource**
   (a) Infrastructure
   - Is there an area or room designated for emergency care? [ ] Yes [ ] No
   - Is there running water? [ ] Yes [ ] No
     - If yes: Interrupted / Uninterrupted (please circle one)
   - Is there an electricity source? [ ] Yes [ ] No
     - If yes: Interrupted / Uninterrupted (please circle one)

   (b) Equipment
   - Is there a list of essential emergency care equipment available? [ ] Yes [ ] No
   - Is there access to repair if equipment fails? [ ] Yes [ ] No
   - Is there access to repair outside the health care facility? [ ] Yes [ ] No
     - If yes, how far (in km): 1-25 / 26-50 / 51-200 / >200 (please circle one)
   - Is there an agreement for the maintenance of the equipment with the supplier? [ ] Yes [ ] No
   - Do the health care staff in the emergency room get training in the use of the equipment? [ ] Yes [ ] No
   - Is there information available on supply, repair, and spare parts for the equipment? [ ] Yes [ ] No

5. **Quality, safety, access and use**
   - Is there a policy to promote training for health care staff in the essential emergency management of trauma, obstetric care and anaesthesia? [ ] Yes [ ] No
   - Is there a policy to update the protocols for the emergency management of trauma and obstetric care adapted to local needs? [ ] Yes [ ] No
   - Are records maintained? [ ] Yes [ ] No

6. **Policy**
   - Is there any guidelines on donation, procurement, and maintenance of all EE equipment? [ ] Yes [ ] No
   - Is there a list of extra health personnel to be contacted in disaster situations? [ ] Yes [ ] No

---

*For guidance use WHO generic list of Essential Emergency Equipment*

**Department of Essential Health Technologies**

World Health Organization, 20 Avenue Appia, 1211, Geneva 27, Switzerland
Fax: 41 22 791 4836 Internet: [www.who.int/surgery](http://www.who.int/surgery)
WHO Generic Essential Emergency Equipment List
This checklist of essential emergency equipment for resuscitation describes minimum requirements for emergency and essential surgical care at the first referral health facility

<table>
<thead>
<tr>
<th>Capital Outlays</th>
<th>Quantity</th>
<th>Date checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resuscitator bag valve and mask (adult)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resuscitator bag valve and mask (pediatric)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen source (cylinder or concentrator)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mask and Tubings to connect to oxygen supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light source to ensure visibility (lamp and flash light)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stethoscope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suction pump (manual or electric)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood pressure measuring equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermometer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scalpel # 3 handle with # 10, 11, 15 blade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scalpel # 4 handle with # 22 blade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors straight 12 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors blunt 14 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal airway (adult size)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal airway (pediatric size)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forceps Kocher no teeth 12-14 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forceps, artery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidney dish stainless steel approx. 26x14 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourniquet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needle holder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Towel cloth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste disposal container with plastic bag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterilizer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nail brush, scrubbing surgeon's</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal speculum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bucket, plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drum for compresses with lateral clips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examination table</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash basin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Renewable Items

<table>
<thead>
<tr>
<th>Capital Outlays</th>
<th>Quantity</th>
<th>Date checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suction catheter sizes 16 FG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tongue depressor wooden disposable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasogastric tubes 10 to 16 FG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batteries for flash light (size C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV intravenous fluid infusion set</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intravenous cannula # 18, 22, 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scalp vein infusion set # 21, 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syringes 2ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syringes 10 ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposable needles # 25, 21, 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharps disposal container</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capped bottle, alcohol based solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterile gauze dressing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bandages sterile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adhesive Tape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needles, cutting and round bodied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suture synthetic absorbable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Splints for arm, leg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary catheter Foleys disposable #12, 14, 18 with bag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absorbent cotton wool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet, plastic PVC clear 90 x 180 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloves (sterile) sizes 6 to 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloves (examination) sizes small, medium, large</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face masks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aprons, utility plastic reusable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory list of equipment and supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best practice guidelines for emergency care</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supplementary equipment for use by skilled health professionals

<table>
<thead>
<tr>
<th>Capital Outlays</th>
<th>Quantity</th>
<th>Date checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laryngoscope handle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laryngoscope Macintosh blades (adult)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laryngoscope Macintosh blades (pediatric)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV infusor bag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magills Forceps (adult)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magills Forceps (pediatric)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stylet for Intubation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spare bulbs and batteries for laryngoscope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endotracheal tubes cuffed (# 5.5 to 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endotracheal tubes uncuffed (# 3.0 to 5.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest tubes insertion equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cricothyroidectomy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This list was compiled from the following WHO resources:

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

Clinical Procedures Unit
Department of Essential Health Technologies
World Health Organization
20 Avenue Appia, 1211, Geneva 27, Switzerland
FAX 41 22 791 4836

www.who.int/surgery