

## THE DTC SYMPOSIUM – FREIBURG 2012: THE TAKE HOME MESSAGES

### THE PANEL DISCUSSION: WHERE IS MEDICAL DEVELOPMENT CO-OPERATION HEADED?

- The findings at third world countries are
  - Western doctors have gone as missionaries
  - Many high technology equipment have been donated
  - Few training programs have taken place
  - According to some “the local doctors want to run before they learn to walk” implying that they would like to learn laparoscopic surgery and other modern surgeries before they learn the basic surgeries.
  - In many hospitals the equipment lies unused because of useless donations and poor maintenance
  - The visiting consultants do not teach the local surgeons
- Unlike community health, HIV, etc there is no representation at WHO regarding surgical work. There is need for raising awareness in the various countries at the local level at least regarding essential surgical services
- Diagnostic camps and training programs help take modern surgical facilities to the remote areas in developing countries and this is a worthwhile investment for the western countries.

## THE DIAGNOSTIC CAMP MODEL

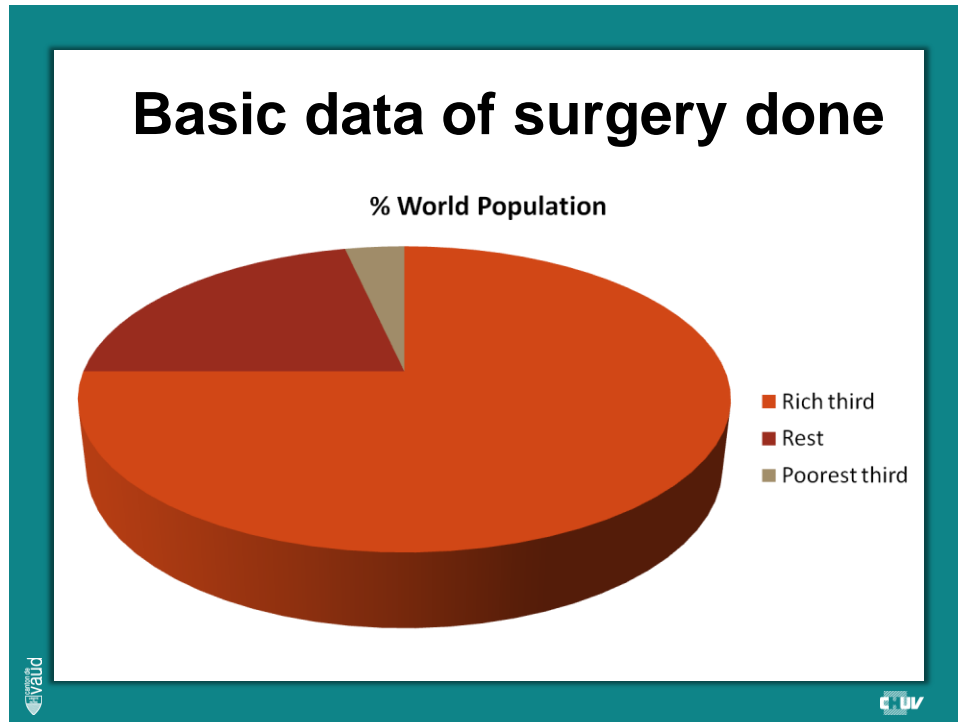
### DIAGNOSTIC CAMPS

- All diagnostic facilities at hospital are taken to interior villages
- Three fourths of surgical patients were diagnosed first at these camps

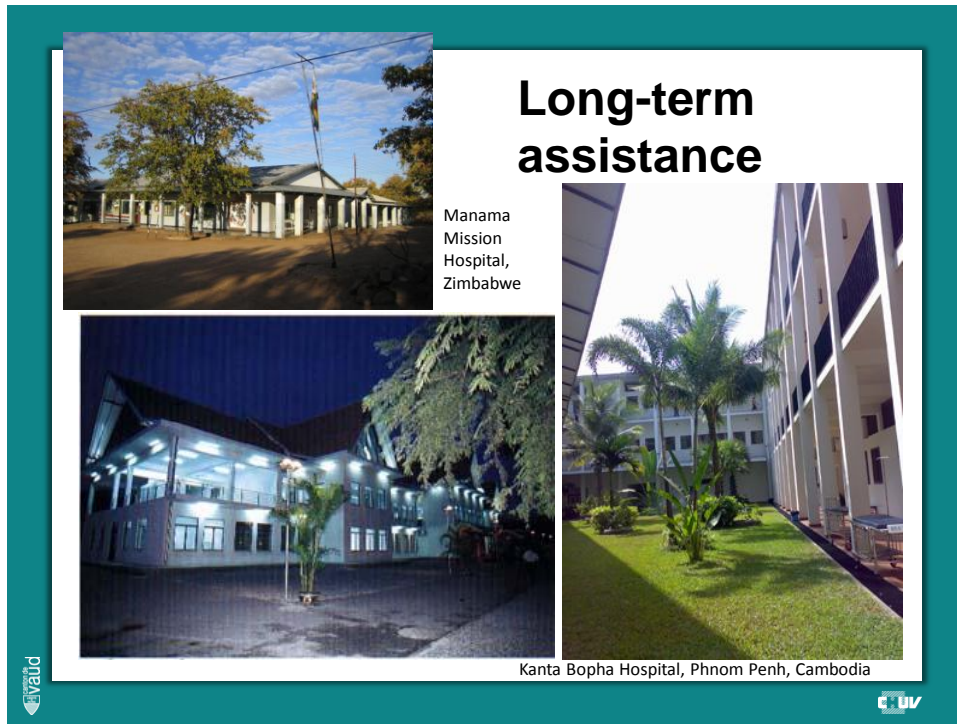


- Funding is necessary for research work and training programs to make modern surgical treatment facilities available to the poor and this is the most cost effective method

- Surgical conditions form 11% of global disease burden and 80% of deaths occur in the lower – middle income countries
- Medical care second most common cause of rural debt, 40% borrow heavily and 16% go below poverty line due to one in patient admission in rural India
- In Africa elective surgeries form only 5% of the surgical workload



- Unmet surgical needs [important]
  - Maternal deaths
  - Obstetric fistula
  - Road traffic accidents and trauma
  - Cancer and others
- Infrastructure building has high priority and must resist massive programs
- Clinical officers with certificates perform surgeries in African countries
- Models
  - Long term individual support with missionaries, etc [Fistula hospital Addis]
  - Creation of locally based institutions [KB Hospital Cambodia]
  - Short term assistance [Operation Hernia]
  - Twinning intuitions




- List of essential surgery skills
- Locally based training
- Sitilingi model

## Achievements

- No mothers died in child birth – 9 years
- Infant deaths – **from 147/1000 to 20/1000**
- Malnutrition – down by 70 %
- Pregnant mothers check up – from 11% to 95 %
- Almost 100% completion of treatment in tuberculosis

**That formal education is mandatory to do health care is a myth**



Help people heal themselves.....

- Available, affordable and acceptable health care

- Health worker training and taking health care to door steps
- Infant deaths reduced from 147/1000 to 20/1000 in 10 years
- Farming and craft initiatives
- Funding capital needs with medical elective programs
- WHO Model
  - Best practice protocols
  - Teaching, training and equipping
  - Evidence based decision making
  - Partnerships

#### MODERN SURGERY FOR THE POOR

- Carcinoma esophagus is a common condition in poor countries
  - Palliation is possible only in 20% [N=422 in 1 year]
  - Stents made in china using gastroscopie is a feasible option with fair results
- Minimally invasive surgeries
  - Are more relevant for the rural population
  - Could be made available with
    - Diagnostic and surgical camps
  - Could be made affordable
    - Innovative methods of reducing the cost
    - Insurance programs
  - Lowering the cost of modern surgeries
    - Working holiday plans
    - Donations for capital equipment and disposables
    - Online and hands on training programs
  - A variety of laparoscopy assisted procedures
  - Gasless Lift laparoscopic surgeries
    - Safe, simple and cost effective and easy to learn
    - Single incision surgeries possible

# GASLESS LAPAROSCOPY

- Safer
- Simpler
- Less Expensive



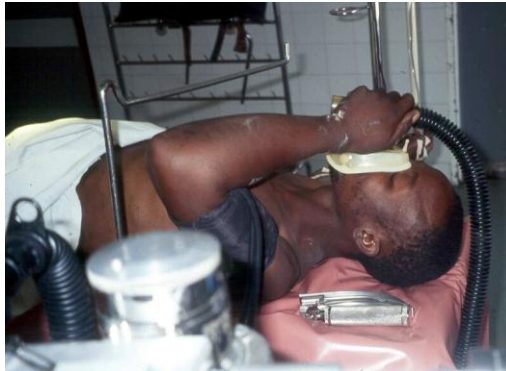
- The Nepal experience
  - 300 bed hospital with 104 laparoscopic surgeries in 8 years till 2008
  - German doctor with donations for capital items and disposable and 3 training sessions
  - Later certificate program resulted in 8 surgeons performing about 10 laparoscopic surgeries a week
- Surgery on the New born
  - Complex, specialized and involves child, parents and care giver
  - Needs to be adapted to the local cultural needs

## ANESTHESIA WITHIN LIMITED RESOURCES

- Primary anesthesia in developing countries
  - Emergency and low technology
  - Lack of protocols
  - More and different risk factors. However the western risk factors like Obesity and diabetes , etc are on the rise
  - Per anesthesia mortality decreasing in western world despite increasing risks
  - Draw-over apparatus and ketamine are still good for developing countries and are safe
  - With good clinical skills basic monitoring is sufficient for good anesthesia
  - Autologous blood transfusion are still relevant
- The Malawi experience

# Challenges

- **Shortage of staff:**
  - 6 ACO in 24 hrs. – 365 days
  - Only 1 ACO per Theatre suite
  - Recovery: No trained personnel

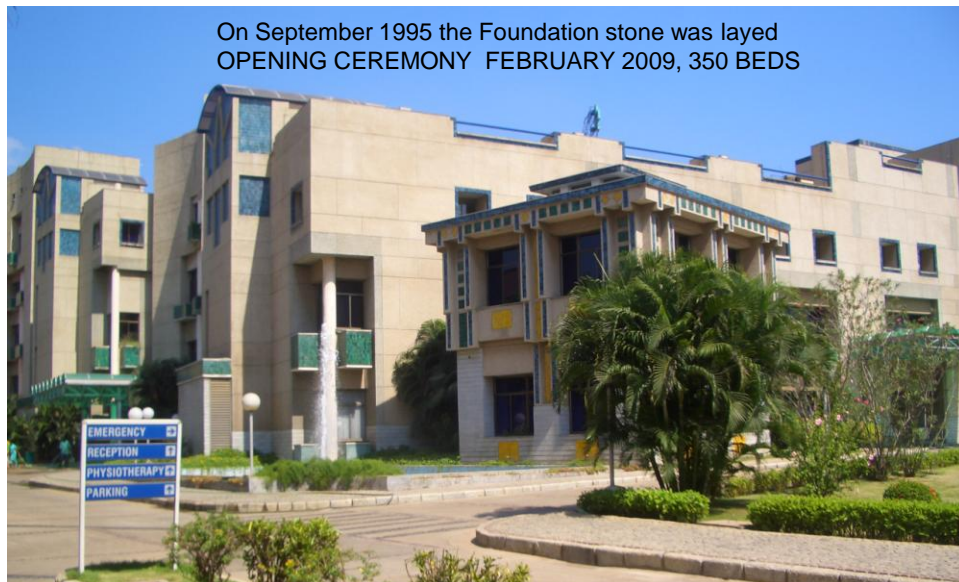


- Anesthesia is given by ACO [Anesthesia Clinical Officers]
- G/A with or without intubation, with LMA and total intravenous anesthesia
- Spinal and various blocks
- Mortality 1 in 1500 for emergency and none in elective surgeries [N=279]
- 50% surgeries were under spinal anesthesia
- Need more training and equipment
- Education of Malawian ACOs and Intensive care nurse
  - Training is tailored to actual needs
  - Evidence based training [eg. Giving sufficient fluids pre operatively]
  - 2 week course with snowball system
  - Online follow up and donations for training and equipment from western world
- The MSF experience
  - Unusual procedure especially due to violence
  - Very basic equipment
    - Draw over apparatus and pulse oximeter
    - Low volume easily transportable medicines
  - Ketamine is ideal
    - No dilution, special preparation and easy storage
    - Less expensive
    - Ideal for shock and trauma
    - Induction [2mg/kg IV or 10 mg/kg IM]
    - Maintenance [0.5 to 1 mg /kg IV or 5 mg/kg IM Q 20 minutes]
- Tetanus in Malawi

- 80% mortality if untreated and 20% if treated
- Penicillin, immunoglobulin, Magnesium sulphate and sedation
- Managed by trained nurses who could use ventilators

## TRAUMA MANAGEMENT

- Management in developing countries
  - Definition of acceptable standards is important
  - Stainless steel could be used instead of Titanium
  - Less expensive instruments are available
  - Possible to have a essential instrument boxes
- International standard hospital in developing countries



**Trauma care at MIOT CHENNAI, TAMIL NADU**  
 FREIBURG, NOVEMBER 24, 2012    ULRICH HOLZ, STUTTGART

- Less expensive to build than in Western countries
- Caters to upper middle class
- Unfortunately to make both ends meet such hospitals often resort to unethical practices as they cannot charge as much as in western countries. This is often not know to the sponsors
- Osteomyellitis in Malawi
  - A common problem because of neglect
  - Sequestrectomy and saucerization is necessary.
- MSF experience with fracture management
  - POP and tractions are still relevant
  - Follow up X rays are often not necessary and could cause more problems

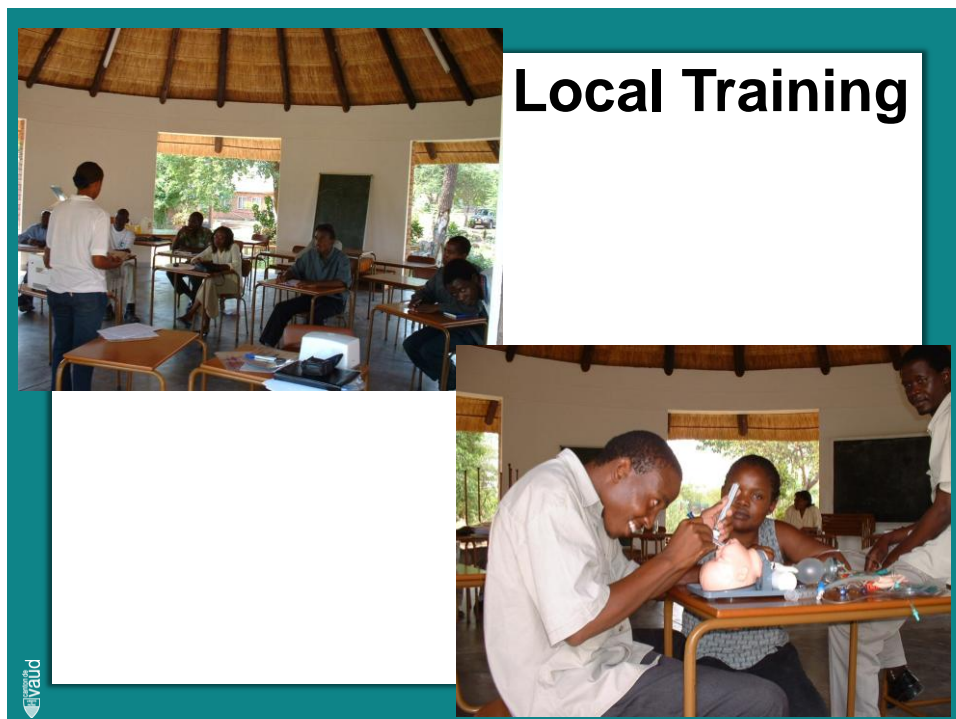
- Perkin's traction is still very relevant
- First debridement is very important for the open fractures
- The Rwanda experience
  - Children injured in RTA are from rural areas [90%] and pedestrians [68%]
  - Bicycles were the most common offenders and lower limbs the common site of injury
  - 80% of the interventions necessary were orthopedic interventions
- Experience with ambulance
  - The staff had no training and vehicles no maintenance
  - Vehicles were often misused
  - Proper training translates to significant improvement

#### WORKING INTERNATIONALLY

- Students are awed by the great needs and their limited capabilities
- GandHi : a common site for gathering information for students
- There is need for preparation before going for electives
- Missions week raises support for missionary work
- There is a lot interest on global health topics
- The students feel that because they are from the West the developing countries treat them as rich persons

#### OVERALL INFERENCES

- TRAINING LOCAL DOCTORS AT THE LOWER/MIDDLE LEVEL INCOME [LMIL] COUNTRIES AT THEIR PLACES WITH SNOW BALL EFFECT IS THE BEST AND MOST COST EFFECTIVE OPTION





- WELL TAUGHT BASIC SKILLS CAN SAVE MANY LIVES AND NEEDS LOBBYING AT THE VARIOUS NATIONAL LEVELS
- ONLINE AND CONTACT TRAINING PROGRAMS CAN MAKE GAS LESS LIFT LAPAROSCOPIES AND OTHER MINIMALLY INVASIVE SURGERIES AVAILABLE IN LMIL COUNTRIES AND SPECIALIZED CARE IS A NEED IN LMIL COUNTRIES TOO

## WHAT DOES ARSI /IFRS BRANDING INVOLVE?

- Standardization of rural surgical centers
- Regular audits
- Marketing accredited hospitals



- LMIL COUNTRIES LOOK TO WESTERN OR DEVELOPED COUNTRIES FOR CAPITAL AND TRAINING PROGRAM FUNDING.