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REHABILITATION SERVICES TO WAR WOUNDED IN EL SALVADOR

ANNEXES

Prepared by:
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San Salvador, October 31st., 1992

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INTRODUCTION

A study was carried out to assess the Hospital's surgical capacity to be able to provide medical care to war wounded ex-combatants in need of reconstructive surgery.

I visited the following hospitals evaluating mainly it's surgical capacity.

Other members of the advisory team visited areas such as physical therapy and rehabilitation and different organizations devoted to provide care to disabled veterans.

Considering my condition as Surgeon and due to the very much short time available my work was focused on assessment of hospitals.

Hospitals assessed:

Hospital San Rafael, Santa Tecla
Hospital Rosales, San Salvador
Hospital Militar, San Salvador
Hospital San Juan de Dios, San Miguel
Hospital Santa Teresa, Zacatecoluca
Hospital San Juan de Dios, Santa Ana
Centro de Salud de Chalchuapa
Klinica la Esperanza de los Mártires, Guarjila

Reports obtained from these site visits are presented below:

Also, a list of the patients as presented by the F-16 which includes pre-diagnostics; and based on this, an estimated of surgical cases based on diagnostics and projected surgeries.

HOSPITAL SAN RAFAEL

SANTA TECLA

HISTORY

Hospital San Rafael was founded around 1885 as a Health House. In January 16th, 1990 was named HOSPITAL SAN RAFAEL.

The trusteeship WALTER A. SOUNDY financed a 5 story building for hospitalization Services. From the 1st to the 4th floor are used by the Hospital San Rafael and the fifth floor has been rented by the Instituto Salvadoreño del Seguro Social to provide health care services to their beneficiaries.

Physical Area:

Total Constructed Area: 16,275 m2.

Hospitalization Area: 10,590 m2.

In the older part of the building we find the Hospital's Administration. It's structure can not be modified, because this part is considered National Patrimony.

The hospital is a five story building. The fifth floor has been rented by the Instituto Salvadoreño del Seguro Social for his beneficiaries. There are two elevators of which only one is working properly at times, not always. There is a forklift.

On the 4th floor there is an area of 3 rooms with a capacity for 4 beds each room, to provide health services to the wounded ex-combatants of the FMLN. Up to now, this area does not have any furniture.

The number of beds the hospital has is 230.

CAPACITY EVALUATION

Most of the surgeries are emergencies . The most numerous surgeries are performed on weekends, on which an average of 24 cases are done daily between Orthopedic surgery and General surgery.

They handle approximately 14 deliveries daily.

This great number of emergencies are handled in the same operating rooms assigned for elective surgery, being this a limiting factor for the normal working operations and care of the elective cases.

OUTPATIENT CLINIC

In the general outpatient clinic the hospital has:

20 doctors who work: 2 hours daily, 5 days a week.

The Specialties Clinic is handled by the Hospital's staff doctors plus the following Specialists:

Dermatologists: 2 dermatologist who work; 2 hours daily,
5 days a week.

Ear/Nose/Throat

Specialist 1 ENT who works : 2 hours daily, 5 days
a week.

Cancerologist: 1 cancerologist who works: 2 hours daily,
5 days a week.

Gastroenterologist: 1 Gastroenterologist who works: 4 hours
daily, 5 days a week.

Psychiatrist: 1 who works: 2 hours daily, 5 days a
week.

Pulmonary Specialists: 2 who work, 2 hours daily, 5 days a week.

MEDICAL STAFF WHO PROVIDES CARE TO HOSPITALIZED PATIENTS

The Medical staff's salary is \$82.35 for 40 hours worked in a
month. That is 2 hours, 5 days a week.

PERSONNEL

ORTHOPEDIC WARD

Orthopedic Surgeons: 5 specialists who work: 4 hours daily, 5 days a week.

Orthopedic Residents: 2 who work full time. (8 hours a day plus overtime)

The Orthopedic service has 28 beds and approximately 10 elective surgical cases are performed a week.

SERVICES OF GENERAL SURGERY

PERSONNEL

General Surgeons: 8 who work: 4 hours, 5 days a week.

General Surgery

Residents: 6. It was not possible to determine the number of elective surgical cases practiced, but in the totals are also included the emergencies.

Plastic Surgeon: 1 who works: 4 hours daily, 5 days a week. He performs 2 surgical cases a week.

Anesthesiology: 2 Anesthesiologist who work: 4 hours for 5 days a week and they also have 5 Technical Anesthesiologists.

Neurosurgeon: 2 neurosurgeons who work: 2 hours, 5 days a week. An average of 2 surgical cases are performed.

Pathologist: 1 who works in the Rosales Hospital, since there is no Pathology Laboratory in the San Rafael Hospital.

Internal Medicine: 3. One who works: 4 hours a day, 5 days a week and 2 who work: 2 hours a day five days a week.

Residents in Internal Medicine: 5 full time.

Cardiologist: 1 who works: 4 hours daily, 5 days a week.

GENERAL SURGERY WARD

There are 34 beds in the surgical ward for men and 16 beds in the surgical ward for women. Usually, when the necessity arrives 2 patients are placed in the same bed, due to the lack of space.

NURSING STAFF

Registered Nurses RN 44. There are 49 positions where 5 are presently vacant.

Practical Nurse 87. 25 had been appointed to other hospitals of the MOH, but are assigned to the San Rafael Hospital.

OPERATING ROOM

There are 5 operating rooms of which only 3 are in use and one of them is assigned only for emergencies. There are 2 operating rooms not being used because they lack of a anesthesia machine.

The Operating room schedule is from 7:00 am to 3:00 pm for Emergencies is open 24 hours.

If there is an emergency who needs immediate treatment, the elective surgery is canceled.

Monitors: 3

Anesthesia Machines 5 (3 in use and 2 that are new and have not been installed yet.)

Sterilization Equipment: Is in good conditions

RECUPERATION WARD

There is only the room and there is no equipment or staff assigned to that area.

REGISTERED SURGICAL NURSES

Registered Nurses: 7
Practical Nurses 15
Surgery Equipment: very few and old.
Surgical Material: Very scarce, specially in orthopedic surgery where the patient has to buy it in the different commercial distributors in the country. And usually the distributors do not have it in stock.

RADIOLOGY DEPARTMENT

Radiologist: 2 who work: 2 hours daily, 5 days a week.
Radiology Technicians: 8 who work: 24 hour shifts.
X-Ray Machines:
Fixed X-Ray Machines: 2. One of them has fluoroscopy capacity.
Portable X-Ray Machine: 3. One of them is out of service.
Scanner: 0
Ultrasound: 0
X-Ray Film: 0. The patient has to purchase it, out of town.

Developing Capacity: There is no developer machine and it is developed by the wet method.

There is no material for special radiological studies such as arteriography, Renal Studies, etc.

PHARMACY

The pharmacy lacks of most of the drugs prescribed for the patients.

Minor surgery is practiced in the outpatient clinic at an average of 40 daily cases.

DIET AND FOOD PREPARATION

The kitchen metal grills are in very bad conditions.

There are very few hot meals' transportation carts.

The hospital needs small and big kitchen utensils such as pots, pans, etc.

There are no mixers or blenders machines.

They don't have air extractor in the kitchen.

LAUNDRY ROOM

Very old washers which are frequently out of order.

Dryers very old which are frequently out of order.

The clothes dried in the patio. In dry season, there is no

problem, as it is in the rainy season, when is very hard to dry the clothes.

MISCELANEOUS OBSERVATIONS

There is no dining area for the staff.

The bed linens, drapery and patients and surgical gowns are very scarce.

The Operating Resting areas for the Surgeons and undressing room has no furniture, just the lockers.

The hospital is working in it's maximum capacity and if we want to provide services for the FMLN ex-combatants, a great economical aid is needed in order to purchase furniture, Surgical material and staff's salaries.

ROSALES HOSPITAL

SAN SALVADOR

The physical installation is a very old hospital to which many buildings have been added, but still functional. It has gone through at least 3 earthquakes with greater damage.

PERSONNEL

Orthopedic Surgeons 6, of which 4 work 4 hours a day 5 days a week. 2 of them 2 hours 5 days a week and one 6 hours 5 days a week. They do 35 operations per month as an average.

GENERAL SURGERY

55 Specialists. 98 surgeries as an average per month.

PLASTIC SURGERY

7 with 25 surgical cases per month.

EAR, NOSE AND THROAT

There are 3. No information on surgeries.

OFTAMODOLOGY

Apparently there are 21 specialists (?).

The Operating Room is well kept with 2 microscopes and 79 operations are practiced per month as an average.

Great amount of these surgeries have been sponsored by OPS.

ANESTHESIOLOGISTS

There are 6, of which 2 work 2 hours, 2 work 4 hours and 2 work 6 hours a day 5 days a week.

TECHNICAL ANESTHESIOLOGISTS

30

OPERATING ROOM

There are 12 of which 11 are working. Adequate equipment with lamps and tables. Clean. Functioning from 6:30am to 3:00pm 5 days a week for selective surgery and 24 hours for Emergencies.

SPECIALIZED PERSONNEL

Graduated Nurses

5

Assistant Nurses

20

The Recuperating Room has 10 beds with satisfactory equipment and its personnel is 1 graduated nurse and 3 nurse assistants.

MILITARY HOSPITAL

Has a modern building in good conditions, with a total capacity of 159 beds.

MEDICAL PERSONNEL

There are 6 Orthopedic Surgeons who work 3 hours 5 days a week, taking shifts of 24 hours one day per week. Make an average of 80 surgeries per month.

There are 5 General Surgeons who work 3 hours 5 days per week, with 24 hour shifts, averaging 85 surgeries per month.

There are 4 Plastic Surgeons working 3 hours 5 days per week with an average of 25 surgical cases per month.

There are 3 specialist in ear, nose and throat who work 3 hours 5 days per week. They have a Microscope to work.

SURGICAL IN OPERATING ROOM

Ophthalmology:

There are 6 specialists in Ophthalmology who work 3 hours 5 days per week. There are 2 Microscopes in the Operating Room and practice an average of 45 surgical cases per month.

Anesthesia equipment, there are 11, all in good working condition.

Orthopedics equipment and material is deficient and scarce, as well as General Surgery and Neurosurgery.

They have problems with clothing, but not due to amount, thus due to washing machines in bad condition.

At the emergency unit there are 5 deficient operating room, due to lack of equipment.

RADIOLOGY DEPARTMENT

4 Radiologists, working 4 hours, 5 days per week.

Radiology Technicians, 18, who have 24 hour shifts.

Fixed X-Rays Machines, 6, of which only 3 work.

Portable X-Rays Machines, 7, 3 needing repair.

There is lack of film for X-Rays.

Placque processors, there are 3, 2 working.

Medical and nursing personnel is adequate. There is lack of equipment and material, especially for Orthopedics.

REGIONAL HOSPITAL OF
SAN MIGUEL, SAN JUAN DE DIOS

Building under repair due to tornado damaged on the 6th floor, all other floors are in good condition.

Has 399 beds not including Pediatrics and Newborns.

MEDICAL PERSONNEL

Orthopedic Surgeons, 3 who produce an average of 55 surgeries per month.

General Surgeon with 7 Residents in surgery who produce 253 surgical cases as an average per month.

Plastic Surgeons 2, one of which also makes Maxillofacial surgery, with 27 surgical cases per month.

Nose, Throat and Ear specialists, 2 with 5 surgical cases per month. Lack substantial equipment.

There are 2 ophthalmologists practicing surgery on 46 patients per month as an average.

Anesthesiologist	1
Anesthetics Technicians	15
Two nominated Neurosurgeons, but no Neurosurgery equipment, reason	

why they have to take their own instruments to be able to work.
During September, no surgery was performed.

NURSING PERSONNEL

There are 85 graduated nurses of whom only 69 are busy. (85 positions of which only 69 are taken?)

There are 179 assistant nurses of which 156 are busy. (179 positions of which only 156 are taken?)

OPERATING ROOM

There are 6 operating rooms, plus 1 of Orthopedics, all in good structural conditions. Only 3 operating rooms work due to the fact that there are only 3 anesthesia machines, already antiquated.

Air conditioner

Defective

Clean surgical area and in good condition.

PERSONNEL

There are 9 positions for graduated nurses, of which only 6 are taken.

There are 31 positions for assistant nurses of which only 26 are taken.

SURGICAL EQUIPMENT

Lacks everything in all specialties.

Surgical material completely insufficient, especially for Orthopedic surgery.

BLOOD BANKS

There are 2 refrigerators of which 1 is out of order.

RADIOLOGY DEPARTMENT

2 Radiologists and 5 Technicians work in Radiology.

Fixed X-Ray devices, 3, plus 3 who have not been mounted but have been in storage since 1975.

There are 3 Portable X-Ray Devices, all in bad condition.

There is film for X-Rays, but in order to have enough for the month, is used with great limitations, left especially for emergency cases.

There is a plaques developer, in good condition.

Images amplifier	None
Scanner	None
Ultrasound	1

New and in good working condition.

The hospital is overworked with scarce equipment and personnel. Covers present load of patients but cannot increase the number of patient visits without receiving help to increase personnel and equipment purchase.

Due to its size and with medical personnel living in the city and enthusiastic with desire to work in a conflictive zone, it is especially recommended to receive help for the treatment of handicapped with sequels produced by war wounds.

During the visit to MEDECINS SANS FRONTIERS we heard a presentation of their work in general, but unluckily they did not have statistics for us related to handicapped who need future surgery, nor prosthesis services.

During a visit to ONUSAL, another organization without statistics, they are in the midst of carrying a census of handicapped with diagnosis, which shall be ready in the near future.

Portable X-Ray Devices

2

In good conditions.

Ultrasound Devices

1

In good conditions.

X-Ray Film

There is a lack of it but using it economically it is possible to tend to the most needy.

Dry Development of Film

1

In good condition.

Tanks of Wet Development

With enough reactivant.

1 Set

Due to the lack of equipment it would be difficult to cater for more patients in the hospital especially in the area of reconstructive Orthopedics.

HOSPITAL SANTA TERESA

ZACATECOLUCA

Buildings partially deteriorated, dirty.

Total number of beds 250.

MEDICAL PERSONNEL:

There is one Orthopedic Surgeon who works 4 hours, 5 days per week. Produces an average of 8 weekly surgeries. Takes his own equipment to work.

There is one General Surgeon with 4 daily hours, 5 days per week. Average of surgical cases, 2 per week.

There is 1 Plastic Surgeon who visits once per week. Average of surgeries, 5. They lack a Dermatologist.

Nose, Throat and Ears

None

The Ophthalmologist goes only for out-patients.

1

Orthopedic equipment is in irregular conditions.

There is sufficient surgical material for General Surgery.

There is some scarcity in some of the specializations and Orthopedics is quite deficient due to lack of Osteosynthesis plaques and screws.

CLINICAL LABORATORY

Capable to make all routinary tests, although the facility has a deficient air conditioner. No air extractor.

BLOOD BANK

Needs a greater reserve of reactants for blood typing, but has sufficient for the time being.

RADIOLOGY DEPARTMENT

Three Radiologists working.

There are 3 Fixed X-Ray devices and 1 in Emergency, all in good condition and working.

There are 3 Portable X-Rays devices in good condition and working.

Scanner out of order and impossible to repair. Needs to be replaced.

No problems with the amount of X-Ray Film.

Level of Contrast for Radiologic Studies enough. Good development capabilities.

Ultrasound:

Needs repair. Out of order.

NURSING PERSONNEL

There are 60 positions for graduated nurses and only 40 are busy.

There are 361 positions for practitioner nurse and all taken.

In summary, it is a hospital with a good construction, modern, with adequate personnel, only needing a bit of surgical material, especially in Orthopedics to work satisfactorily. Also needs to have Ultrasound and Scanner repaired.

No statistics on handicapped patients needing reconstructive surgery, especially in the area of Orthopedics.

General surgery problems have been resolved.

Based on information provided by Orthopedic Surgeons on 80 cases averaged per month, more or less 80% of the handicapped are sequels of war times. Also outpatient visits see about 800 cases with an 80% of probable surgery needs for handicapped. It is calculated that Orthopedic problems can be solved at the present rate of work

in approximately two years.

There is a need to provide Orthopedic material, especially for Osteosynthesis, what limits the amount of work to be developed.

Neurosurgeons:

There are 4 Neurosurgeons working 4 hours per day 5 days per week and make an average of 7 monthly operations.

Maxillofacial Surgeon:

There is 1 Maxillofacial Surgeon who works 3 hours per day 5 days per week. In September he did not make any operations.

Operating Rooms:

There are 7 Operating Rooms, one of which is for septic surgery; all equipment is in good conditions, clean and working. At the operating room it is worked from 7:00am to 3:00pm 5 days per week and on Saturdays from 7:00am to 12:00 noon.

NURSING PERSONNEL

There are 5 graduated nurses and 48 assistant nurses.

There are 6 Anesthesia machines, all in good conditions.

Surgical equipment is in good state and sufficient.

There is 1 Neurosurgeon who works 1 day per week. Operates an average of 1 case per week.

NURSING PERSONNEL:

Graduated Nurses, 12 with 6 students in social service.

There are 39 positions.

There are 52 Assistant Nurses, 56 positions.

OPERATING ROOM

Have 4 rooms with structural defects, damaged ceilings, no air conditioned.

They work 5 hours per day 5 days per week. Emergencies covered 24 hours per day.

No recuperation Room.

No Intensive Care Room.

PERSONNEL

There is 1 graduated nurse who is the chief nurse and 8 assistant nurses.

Anesthesia Machines
Defective

4

Surgical Equipment
Clothing
Vacuum Sterilizer

Lacking everything
Lacking
Lacking

Surgical Material
Especially in Orthopedics

Scarce

RADIOLOGY DEPARTMENT

There is 1 Radiology in San Salvador to whom Plaques are sent for reading.

There are 6 technicians in Radiology who take the placques.

There are 2 Fixed X-Rays working.

There is 1 portable X-Ray working.

There is no Scanner.

There is no Ultrasound.

There is lack of X-Ray Film, have to be bought.

There is one developer.

There are no Means for Contrast for radiological studies.

The hospital is working at its maximum capacity with many difficulties.

It is very difficult to widen its capability to treat more patients due to lack of medical and nursing personnel, equipment and material.

SAN JUAN DE DIOS HOSPITAL
SANTA ANA

It was inspected on Saturday and at the hospital no elective surgery is practiced nor does external visits exist, only emergencies are taken care of.

Staff doctors do not work neither do secretaries nor the chief of nurses.

Data obtained is very scarce and incomplete for that reason.

MEDICAL PERSONNEL

In no case of the specialties were we able to obtain the number of surgical cases because statistics were under lock and key.

ORTHOPEDIC SURGEONS

There are 6 who work 2 hours daily, 5 days a week.

GENERAL SURGEONS

There are 10, one works 4 hours a day 5 days a week and nine who work 2 hours a day 5 days a week.

PLASTIC SURGEON

There is 1 who works 2 hours a day 5 days a week.

EAR, NOSE AND THROAT DOCTOR

There are 2. One works 4 hours 5 days a week and one who works 2 hours 5 days a week.

OPHTHALMOLOGIST

There are 3. One works 6 hours a day 5 days a week. One works 4 hours 5 days a week and one, 2 hours 5 days a week.

ANESTHESIOLOGIST

There are 2 who work 2 hours 5 days a week.

ANAESTHETIC TECHNICIANS

18 who work 8 hours a day and take shifts.

NEUROSURGEON

There are 2 who work 2 hours 5 days a week.

NURSES PERSONNEL

Graduated Nurses
Assistant Nurses

100 (?)
350

Operating Room:

8, which work from 7:00 am to 3:00pm 5 days a week.

Emergencies are attended 24 hours a day.

They have personnel of 12 graduated nurses and 36 assistant nurses.

It was not possible to obtain information on surgical operations practiced during the last month.

Anaesthesia Machines:

6 with many years of use need maintenance.

Surgery Equipment:

Insufficient for the whole Orthopedic range.

Surgical Material:

Insufficient for all the specialties especially Orthopedics.

CLINICAL LABORATORY

Capable of practicing basic examinations for the attention of all patients.

BLOOD BANK

Satisfactorily complies with its functions. There are 4 refrigerators in good state.

RADIOLOGY DEPARTMENT

Personnel:

Radiologists 1
4 hours a day 5 days a week.

X-Ray Technicians 6
Take in turns 5 days a week.

Fixed X-Ray Devices 2
In good conditions.

Portable X-Ray Devices
3, one of them not working.

Scanner No
Ultrasound No

There is no X-Ray film and the patient has to pay it from his pocket.
Capability to develop. No developer. Has to be developed by the wet method.

No means to contrast radiology studies.

Personnel and physical plant are adequate.

It is recommended to improve the cleanliness.
Should receive Orthopedic and general surgery equipment and material.

Provide enough clothing.

Needs to receive equipment and habilitate the Recuperation Room.

In the Department of Radiology the immediate priority is to receive radiographic film and developing material.

Also needs contrasting media for radiology procedures.

CHALCHUAPA HEALTH CENTER

Number of beds 51

Medical personnel:

General Practitioners 5

Who work 5 days a week.

Social service students 4

Chief of Residents 1

Specialists None

Nurse Personnel:

Graduated Nurses 14

Assistant Nurses 22

Operating Room:

A modern physical facility, clean, 2 operating rooms without equipment.

Operating Room Personnel:

Graduated Nurses 1

Assistant Nurse 1

Working from 7:00am to 3:00pm 5 days a week.

Anaesthetic Machines 1

In bad conditions.

Surgical Equipment Very scarce

Surgical Material Very scarce

No elective surgery practiced due to limitations and personnel,
equipment and surgical material.

CLINICAL LABORATORY

Only basic tests.

BLOOD BANK

None.

RADIOLOGY DEPARTMENT

Personnel:

Radiologist None

X-Ray Technicians 1

Works from 7:00am to 3:00pm 5 days a week.

Fixed X-Ray Device 1

Working.

Portable X-Ray Device None

Scanner None

Ultrasound None

X-Ray Films

Paid by the patient.

Capability for Development.

Only through the wet method.

All complicated and surgical cases are referred to the San Juan De Dios Hospital in Santa Ana.

They do not have the capacity to tend to reconstructive surgery to handicapped veterans.

VISIT TO GUARGILA AND SAN JOSE DE LAS FLORES

On October 27, 1992 we visited Guargila, in the Chalatenango Department where there is a small Hospital called Klinika La Nueva Esperanza de los Martires.

The hospital is built of cement blocks and it was found in very good conditions. They keep it clean. There is potable water and electricity produced by a local electrical generator. It has four small rooms with a total of 8 beds for the patients. There is an operating room without a lamp only with a rustical table and minimal of surgical equipment.

They have a full time physician. We were not able to talk to him, since he was in San Salvador. In the Klinika, we were able to see 2 patients who had surgery and were recuperating well.

COMMENTS

Even though the physician works in very primitive conditions, he obtains good results with his patients.

It is recommended to help the Klinika La Nueva Esperanza de los Martires with surgical equipments and an Operating Room.

In San Jose de las Flores a small town in Chalatenango Department there is no Hospital, they only have a place where some of the wounded ex-combatants are staying and have a Handicraft Shop.

PRE-DIAGNOSIS OF FMLN WAR WOUNDED EX-COMBATANTS

The F-16 organization presented a total of 162 cases with pre-diagnostic, which is itemized as following:

75 PATIENTS OF ORTHOPEDICS

Femoral fracture consolidated in wrong position or not consolidated	10
Tibia fracture and fibula consolidated in wrong position or not consolidated	7
Amputation at arm level.	1
Finger fracture consolidated in wrong position	2
Tibia fracture consolidated in wrong position	5
Jawbones fracture consolidated in wrong position	3
Exostosis	1
Intra-articular foreign body	2
Knee ligament lesion	1
Defective amputation stump	5
Metacarpus fracture consolidated in wrong position	1
Forearm fracture consolidated in wrong position	1

Osteomyelitis	4
Splinter located in the hand	1
Foot fracture consolidated in wrong position	1
Achilles's tendon old section	1
Degenerative arthritis	9

GENERAL SURGERY 66 PATIENTS

Abdominal hernia post surgery	3
Inguinal-scrotal hernia	2
Remaining diagnostics could not be determined	

OPHTHALMOLOGY 36 PATIENTS

Pterygium	4
Enucleation	7
Intra-Ocular foreign body	3
Conjunctivitis	7
Traumatic Cataract	3
Corneal cicatrix	1
Eyelid cicatrix	1

NEUROSURGERY 16 PATIENTS

Residuals of craneo-encephalic trauma	12
Peripheral nervous lesion	2
Lumbar disc hernia	1
Traumatic facial paralysis	1

OTORHINOLARYNGOLOGY 15 PATIENTS

Foreign body	1
Rupture of the Tympanum	3
Otitis Chronic	1
Hearing loss	10

RHEUMATOLOGY

Rheumatoid arthritis	1
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CHEST SURGERY 10

Pleuropulmonary sequel lesion	9
Expansive wave sequel lesion	1

PLASTIC SURGERY 1

Facial Deforming lesion	1
-------------------------	---

UROLOGY 2

Scrotum and Testis sequel injury	1
Urinary via infection	1

VASCULAR SURGERY 1

Venous insufficiency in lower member	1
--------------------------------------	---

PSYCHIATRIC 13

Combat psychosis	13
Chest Surgery	8

All cases are produced by bullet wound or splinter. It is not possible to determine whether they need additional surgery.

ODONTOLOGY

Most of war wounded ex-combatants need odontological treatment

SURGICAL SERVICES NEEDS
FOR WAR WOUNDED EX-COMBATANTS

Description of Surgical Requirements

From the list with incomplete information it has been estimated the following total surgeries required:

Number of surgical cases based on the list provided by F-16: 450 cases.

ORTHOPEDIC SURGERY 270 patients

Femoral fracture consolidated in wrong position or not consolidated. 36

Tibia and fibula fracture consolidated in wrong position or not consolidated. 43

Exostosis needing surgical excision. 4

Intra-articular foreign body, needing to perform arthrotomy and foreign body extraction. 8

Knee ligament lesion, needing to perform reconstruction of cut ligaments. 4

Defective amputation stump, it will be performed the surgical operation as necessary to install prothesis. 18

Metacarpal fracture consolidated in wrong position or not consolidated, needing to perform osteotomy, osteosynthesis and osteal graft. 4

Osteomyelitis, patients must be individually assessed to decide upon kind of treatment to be recommended. 16

Foot fracture in wrong position, patients must be individually assessed to determine surgery as needed. 4

Achilles's tendon old section, will need a tendon graft. 4

Degenerative arthritis, needing to perform arthrodesis or an articular replacement depending on age and occupation. 9

Forearm fracture consolidated in wrong position, needing to perform osteosynthesis with plate and screw and osteal graft. 4

GENERAL SURGERY

There is no data available to be able to plan surgical procedures

OPHTHALMOLOGY	36 cases
NEUROSURGERY	16 cases
OTORHINOLARYNGOLOGY	15 cases
CHEST SURGERY	15 cases
PLASTIC SURGERY	2 cases
UROLOGY	4 cases
VASCULAR SURGERY	2 cases

Needs to be assessed by each specialist to decide whether they need surgery or not

EVALUATION AND RECOMMENDATIONS ON THE
SURGICAL TREATMENT OF THOSE WAR AMPUTEES

In order to tend to war handicapped it is indispensable to have a census of those with the exact diagnosis.

In all of our visits with different government, non-governmental, international organizations, FMLN, we have been unable to obtain them.

Apparently, to date a census is being carried out with a pre diagnosis. It is necessary to have a census with a complete diagnosis in order to adequately qualify the attention to be received the handicapped.

Without the census it is impossible to calculate on necessary hospital beds, specialists and medical equipment and material to be able to offer them good attention.

MEDICAL PERSONNEL

There are enough specialists with excellent training and experience to tend sequels of war wounds in El Salvador in the areas of:

Orthopedic Surgery
Plastic and Maxilo Facial Surgery
Ophthalmology
Nose, Ear and Throat Specialists
General Surgery
Anesthesiology
Neurology
Radiology

Salvadorian doctors have a very low salary from the government of the Republic to work in state hospitals; that is why they decide to attend mainly to their private practice to have sufficient income to sustain standard life adequate to their position in society.

They only work from 2 to 4 hours per day in hospitals, not being enough to cover the needs of medical students of the hospital population. Only one surgical case needs 20 or more hours of dedication.

NURSES

It is insufficient for two reasons:

- 1- Due to Decree 111 a great number of nurses were allowed to retire prematurely.
- 2- The closing of nursing schools which cut the production of future nurses.

HOSPITALS

There is a lack of beds to tend to civilian population in their medical surgical needs for common illnesses.

All hospitals lack surgical and medical equipment and necessary instruments to give adequate medical attention to the present demand of services, reason why it would be very difficult to cater for veterans who would need reconstructive surgery previously to their prosthesis and rehabilitation, if they are not provided with additional resources.

MILITARY HOSPITAL

It is a very special case and at present is the best hospital in the Republic of El Salvador.

It has very modern buildings and completely adequate to tend to those who have the right to go to it.

Medical and nurse personnel are well prepared and in sufficient numbers.

Surgical medical equipment is satisfactory.

It lacks surgical material especially in Orthopedics but due to the end of war and diminishing of military help it shall have problems to attend for veterans with residual wounds who need surgery without an additional help for the purchase of surgical medical material.

RECOMMENDATIONS

- 1- The urgent formation of a surgical and administrative medical team to visit concentration camps of FMLN to carry out a handicapped census with an exact diagnosis.
- 2- I suggest hiring professional doctors and administrators at a full time to carry out.

In the medical equipment there should be following specialists:

Orthopedic Surgeon
General Surgeon
Plastic Surgeon
Ophthalmologist
Radiologist

Administrative support equipment shall have the following:

MEDICAL PERSONNEL

Once the census of the handicapped with the correct diagnosis has been prepared, the necessary specialists should be hired to give them treatment offering the hired a sufficient salary so they won't need to work outside the system with private patients and are able to dedicate their time to solve the problem of the handicapped.

NURSING PERSONNEL

A transitory decree should be issued to allow retired nurses to work in this project without losing their retirement rights earned through Decree 111, or pay them a sufficient salary to work days of 12 to 16 hours per day until having solved the problem of medical attention to handicapped veterans.

HOSPITALS

- 1- Since there is a chronic lack of beds and it is not convenient for this program to construct new buildings and since there are already many patients who do not need to stay in the hospital where surgery was performed on them, it is necessary that it is under the control of the surgeon who operated on them and due to social conditions they cannot be sent back to their town or settlement because they would practically be abandoned without possibilities of receiving medical treatment in case of a complication or cannot continue with their rehabilitation treatment.

It is proposed the creation of refuges to provide them with shelter, bed and food to those handicapped in treatment.

It should be reasonably close to the hospital.

It shall have a nurse during the day to supervise them and detect any complications.

Should have transport to rehabilitation centers.

- 2- Hospitals need to receive surgical medical equipment enough to adequately treat the number of patients determined according to the census carried out.

ESTIMATION OF NECESSARY TIME TO
PROVIDE TREATMENT TO 270 ORTHOPEDIC SURGICAL CASES

From the list provided to us by the F-16 and the approximate estimated number of 270 Orthopedic surgical cases, the following surgical schedule would be considered to be completed with a surgical team formed approximately by the following members:

- 1 Orthopedic Surgeon
- 2 Graduated Nurses, specialized in Operation Room
- 4 Auxiliary Nurses, specialized in Operation Room
- 2 Anesthesia Technicians

The following times for each surgical operations are provided as follows:

Femoral fracture consolidated in wrong position or not consolidated. Operating 2 cases a day per 18 days to cover all patients	36
Tibia and fibula fracture consolidated in wrong position or not consolidated. Operating 3 cases a day per 17 days	43
Exostosis The four cases can be operated in a day	4
Intra-articular foreign body, Operating four cases a day per 2 days	8
Knee ligament lesion, Operating two cases a day per 2 days	4

Defective amputation stump, Operating four cases a day per 2 days	18
Metacarpal fracture consolidated in wrong position or not consolidated, All cases can be operated in a day	4
Osteomyelitis, Probably it will need several procedures, it can be calculated one surgical day per case per 16 days	16
Foot fracture in wrong position, Two cases a day per 2 days	4
Achilles's tendon old section, Four cases, two a day per 2 days	4
Degenerative arthritis, 2 cases a day per 5 days	9
Forearm fracture consolidated in wrong position, It can be operated in one day	4
Total estimated surgical time	4 months

It is considered that one surgical team can solve the total of 170 orthopedic surgery cases.

Regarding all other surgical cases it is very difficult to make an estimate since there is no accurate diagnostics, the total of orthopedic surgical cases can be solved in four month of surgical time and starting with this estimate, the total surgical time necessary can be calculated by adding the number of surgical teams needed.

Suggested cost:

One Orthopedic Surgeon	\$3,000.00 per month
Graduated specialized in Operating room	\$ 700.00 per month
Auxiliary Nurses specialized in Operating room	\$ 500.00 per month
Three anesthesia technicians	\$ 700.00 per month

COMMENTS

It is necessary to provide enough orthopedic equipment and material, clothes for surgery room, anesthesia machine fully operating and with enough provision of anesthetics and medical material as necessary to the surgical team to allow an efficient performance. The Operation room must be fully equipped.