TECHNICAL & FINANCIAL FILE

REINFORCEMENT OF TERTIARY HEALTH CARE IN THE PALESTINIAN TERRITORIES - PHASE III

PALESTINIAN AUTONOMOUS TERRITORIES

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ABBREVIATIONS

ALoS:	Average Length of Stay
BoQ:	Bill of Quantities
BTC:	Belgian Technical Cooperation
CABG:	Coronary Artery Bypass Grafting
Cath-Lab:	Catheterisation Laboratory
CCU:	Coronary Care Unit
CPA:P	Continuous Positive Airway Pressure
DGIC:	Directorate General of Intentional Cooperation
EGH:	European Gaza Hospital
GDP:	Gross Domestic Product
IABP:	Intra Aortic Balloon Pump
ICCU:	Intensive Coronary Care Unit
ICU:	Intensive Care Unit
IMR:	Infant Mortality Rate
MD:	Medical Doctor
MoH:	Ministry of Health
N/A:	Not Applicable
NCD :	Non-Communicable Diseases
NGO:	Non-Governmental Organization
NICU:	Neonatal Intensive Care Unit
OT:	Operating Theatre
PCBS:	Palestinian Central Bureau of Statistics
PICU:	Paediatric Intensive Care Unit
PTCA:	Percutaneous Transluminal Coronary Angioplasty
ToR:	Terms of Reference
UNRWA:	United Nations Relief & Works Agency
VAT:	Value Added Tax – typically 21%

EXECUTIVE SUMMARY

Three major events are at the origin of the actual technical and financial file

1. In order to strengthen and complete the already implemented Health II program in Palestine there is a need for both the completion of fully operational cardiac facilities (cardiac wings) in Gaza with a population of over 1,4 million (M) inhabitants, as well as in the MoH facilities in the West Bank with a population of 1,8M. The need for both types of specialized cardiac facilities is of high priority. The general health conditions since the completion of Health II have further deteriorated by the years-old crisis in the area. Because of the now complete sealing of the Gaza strip all inhabitants of Gaza have no longer access to advanced medical care. The incidence of major cardiac risk factors is on the rise. The lack of such facilities and services to deal with cardiac ailments has undoubtedly resulted in increased cardiac mortality and morbidity amongst Palestinians.

2. The paediatric intensive care department in Makassed hospital Jerusalem has a capacity problem since the upstart of a continuous and successful international paediatric cardiac surgery program. Because of the isolation of Jerusalem since the building of the wall, this small but recently renewed department is running at a 175% capacity rate. Despite the excellent care taking this could raise the incidence of intra-hospital infections to epidemic proportions.

3. The disastrous results of the neonatology department in Shifa hospital in Gaza city, (report of Dr. Keutgen 2005) indicate that there is firstly an urgent need for an upgrade of this vital department and secondly a need for intensive training of all staffs given the problem of the complete lack of expertise and training of the local care-takers. Structurally there is a need for a thorough refurbishment of the dilapidated neonatology and obstetrics / gynaecology infrastructure.

On the 12th December 2007 during the special meeting of the Partner Committee between the Kingdom of Belgium and the Occupied Palestinian Territories, the identification of a third phase was approved. At the latest Belgian-Palestinian cooperation joint committee meeting (June 14th, 2008), Belgium confirmed its willingness to finance 1) a new ICU/CCU and a cardiac surgery operation room in the European Gaza Hospital Gaza, 2) a cardiac OR and adjacent ICU at Ramallah hospital, and all required training components, 3) the extension of the PICU in Makassed hospital and 4) the upgrade of the neonatology department in Shifa which are mandatory to ensure acceptable clinical outcome results in these highly specialized services. The proposed program in this report represents the third phase in the Belgian-Palestinian health support projects (The first being cath-lab in MoH hospital Ramallah, a CT-scan and neonatal unit for Shifa hospital Gaza, the second the establishment of a cath-lab in the EGH Gaza and an ICU/CCU in Ramallah)

The general objective of the project is to:

"To improve the global care in the Palestinian Autonomous Territories by reducing mortality and morbidity due to cardiac and congenital ailments in children and adults"

Thus the specific objectives of the project are:

To upgrade the diagnostic and therapeutic cardiac care facilities in three tertiary care hospitals (one in the Gaza strip, one in Jerusalem and one in the West Bank)

and

To upgrade the treatment capacity in one tertiary health centre in Gaza City.

This report presents a detailed plan to guide the establishment and execution of all components of this project. The report details intermediate results, related tasks and activities, timelines, budgets, indicators, risk analysis, as well as proposed management structures to ensure sustainability.

The four expected results of the project comprise:

R1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.
R2. Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended.
R3. A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department.
R4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.

The total budget for all projects is estimated at Euro 5.0M. The budget is allocated to 3 major stages:

1. Infrastructure
2. Training
3. Equipment

The total budget needed varies depending on which options are selected for the infrastructure. The key requirement of a fully operational cardiac wing is to ensure the close proximity of the operating rooms, ICU, cath-lab and other support facilities. Lack of mobility and shortage of construction material could raise some specific concerns especially in the isolated Gaza strip. The project success is highly dependent on skilled and specialized Palestinian health caretakers. The provision of quality cardiac care services requires continuous education and upgrading of relevant clinical and management skills. The program includes Euro 500,000 for training physicians, engineers, health care specialists and nurses both locally and abroad (10% of the total budget).

Sustainability presumes a strong commitment from the Ministry of Health to finance the operating costs of the new facilities, as well as extension of the financial incentives scheme currently running in the previous Health II programs. Norwegian Authorities have offered assistance and financial support to implement a cardiac master plan based on previous recommendations by the BTC. Additionally, sustainability assumes that adequate maintenance contracts are secured with appropriate service firms. Future programs need to focus on mitigation of cardiovascular disease risk factors nationally, including campaigns to promote healthier life styles and behaviour modification programs.

ANALYTICAL RECORD OF THE INTERVENTION

DGDC intervention number	NN 3004273
Navigation code BTC	PZA 08 021 01
Partner Institution	Ministry of Health
Duration of Specific Agreement	5 years
Estimated starting date of intervention	January 2009
Partner's contribution	Review salary scale
Belgian contribution	5.000.000,00 Euro
Intervention Sectors	Health Sector
Overall Objective	"To improve the global care in the Palestinian Autonomous Territories by reducing mortality and morbidity due to cardiac and congenital ailments in children and adults"
Specific Objective	To upgrade the diagnostic and therapeutic cardiac care facilities in three tertiary care hospitals (one in the Gaza strip, one in Jerusalem and one in the West Bank) To upgrade the treatment capacity in one tertiary health centre in Gaza City
Results	R1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre. R2. Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended. R3. A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department. R4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.

1. SITUATION ANALYSIS

1.1 THE INTERVENTION ZONE

The Palestinian Autonomous Territories (6.020 km² area) are composed of two separated geographical areas: the West Bank and the Gaza strip. Since the second intifada in 2000 the territories for a total population of 3.76 million are suffering from the siege and closures. The population in the West Bank area, including Jerusalem, (census 2007) is estimated at 2.345.107. The area covers 5.410 km² of land of which 9.9% is build-up land by Palestinians and 3.3% build-up land in Israeli Settlements (in August 2005 and increasing every day). The Israeli's roadblocks and checkpoints severely limit mobility and transportation within the divided West Bank area. The population in the Jerusalem governorate (census 2007) is estimated at 362.521. The apartheid wall isolates the city of Jerusalem, which used to offer highly specialized health care services to the rest of the country. The population in the Gaza strip area (census 2007) is estimated at 1.416.539. The area covers only 410 km² of land resulting in an astonishing population density of 3455 inhabitants/km². Gaza border crossings are completely sealed for most of the time since the 2007 change of governance. For all these reasons it is imperative to provide all essential health care services to all separated localities.

1.2 ANALYSIS OF POLICY FRAMEWORK

A confluence of factors, including political and security events, the growth in settlements, Israeli restrictions on movement and access since the second Intifada, the 2006 halt in donor aid, parallel to a rapid population growth, have placed the already fragile Palestinian economy in a downward cycle of crisis and dependence. Real GDP in 2007 was down to about 3901 M US $, some 14% lower than its peak on 1999, and the GDP per capita was nearly 40% of from its peak. Despite large inflows of aid (mainly humanitarian and emergency aid) this economic decline has led to poverty, with an unemployment rate of nearly 23% in 2007 (from 10% before the Intifada in 2000). Until recently health status indicators were rather good, equal or better than for other Middle East countries. In 2004 the IMR was 22 deaths per 1000 life births and life expectancy at birth was 73 years. Those indicators are deteriorating the last three years due to the strains on the socio-economical environment and mainly due to the insecurity and restrictions on mobility and the lack of adequate funding off services.

The Palestinian Autonomous Territories are to be seen as a state in transition. Its epidemiological pattern of disease reflects those of the developing countries as well as diseases of the developed countries. Infectious, parasitic and nutritional problems are still significant, especially in Gaza and rural areas. Nevertheless non-communicable diseases are currently the leading contributor to the mortality and morbidity patterns in Palestine. Although incidence and prevalence are not reported accurately the data as reported by the MoH for 2004 has shown that cardiac diseases rank as the first leading cause of mortality in Palestine amounting to 19.12% of all total deaths. Mortality rate of all heart diseases is 54.5 per 100,000, with the mortality ranking higher among males (51.1%) than females (48.9%). Between 1967 and 1994, the Israeli army was responsible for administering the health services in the occupied Palestinian territories. Israel aimed at financial self-sufficiency of the health system. Approximately half of the total health budget came from Palestinian taxes and health insurance premiums and a lot of emphasis was placed on public health and primary health care thus investing in primary health care centres and maternal and child care, mainly immunization programs. In contrast, little capital was invested in secondary or tertiary care. In 1994 and post-Oslo, the Palestinian Authority took over the responsibility for the health sector. It consists of four service

providers; the MoH, UNRWA, NGOs and the private sector. The MoH is the main service provider in the West Bank and Gaza followed by UNRWA, NGOs and the private sector. The system in Gaza had followed the Egyptian protocols before the occupation, while the system in the West Bank followed the Jordanian protocols. Although both were treated similarly during the occupation unification and standards where attempted after the Palestinian Authorities took over. Physical isolation has further contributed to differences especially in respect of medical licensing and supervision of health facilities. (Rand 2005).

The priorities in the health sector are determined by the specific geographic, cultural and socio-economic environment, which justifies an intervention in the field of neonatology, congenital and adult cardiac diseases. On a local level, Palestinians have worked and produced two detained national health plans (in 1994 and in 1999) and many of the goals of the first plan where repeated in the second due to lack of being achieved. Another contribution to the national plans has been the national plan for human resource development and education in health. Cardiac diseases are clearly referred to in the 1999 health plan and trying to address health promotion in the area of cardiac diseases as well. In 2005 a midterm developmental plan has been drafted and the MoH has highlighted cardiac care as a priority area. Furthermore mechanisms for the coordination on with NGOs and the private sector in tertiary care has been emphasized as providing tertiary care within all the governorates by the MoH is neither realistic nor feasible nor sustainable under the current financial burdens. Human resources needed in specialties are also identified as a need in both the 1999 health plan and in the human resource development plan.

1.3 Analysis of Institutional and Organizational Framework

The MoH assumed its responsibilities for all levels of the health services including primary, secondary and tertiary health care within the ministry of health services. The health expenditure per capita was 137 US $ in 2007 which corresponds to 11.6% of the GDP per capita (1177.4 US $). This is lower than in some of the neighbouring countries such as Jordan (US$163) and Lebanon (US$510) but higher than in Egypt (US$66). (PCBS 2005).

The total expenditure of the ministry of health in 2005 was 139.6 M US $. Salaries account for more than half the costs (73.2 M US $). Treatment abroad, thus outside the MoH services but covered by finances form the MoH, has taken up a big bulk of the ministries budget; in 2005 it amounted to 21.9 M US $; 15.7% percent of the ministry's total budget. Nevertheless a serious review of the process and measures and criteria for referral abroad have made it possible to decrease this expenditure over the years (down from 30% of the total MoH budget in 2003). In 2006 the Health Sector faced an acute financial crisis after the complete termination of transfer of tax revenues by Israel. There was a sharp decline in foreign aid, which led to interruption of salaries and the inability to ensure operational expenses. In addition a total of 12.000 cases were referred to health centres in neighbouring countries. In 2007 some 500 patients underwent an interventional cardiac treatment abroad for an average cost of 3.000 US $ per procedure. For cardiac surgery the costs soar even higher at 7.500 US$ for a CABG in Egypt and 10.000 US $ in Jordan. Treatment in Israeli Institutions is becoming unrealistic under the current political context: the MoH is charged at a very high tourist rate (15000 US $ per cardiac intervention).

Moreover, logistics of obtaining permits to be treated in Israel is subject to the same political closures and restrictions. Treatment in East Jerusalem has been an option and the main tertiary hospitals are located in Jerusalem. However, Jerusalem is subject to the severe travel and access restrictions as well, due to the building of the apartheid wall. All this shows the needs for further

coordination of services on the tertiary level and upgrading of the quality and standards of current services such as cardiac care in order to minimise referrals outside the country.

The government health sector has basically been operating at a deficit where it not for external funding. Data for 2007 indicated that only 12.8% of the funds are from direct patient payment and over 80% from external donors. (Health Sector Review Jan. 2008). Thus the MoH is highly dependant on external donations, which puts a challenging question on the sustainability of services. Main donors providing support to the health sector are the European Commission and bilateral cooperation agencies like Italy, France, Sweden, Austria, UK and Spain. In this light a co-payment system has to be put in place in the planning and implementation of this intervention. The current political crisis has increased the burden on the health system whereby people seem to be utilising MoH facilities (>50%) more than NGO and private facilities (WHO 2006) seemingly due to financial hardships. A report by the World Bank (2007) has indicated that currently 57.2% of the population is living at the poverty line of 2.1 US $ per day compared to 21% in 2000. There is an absolute need to develop a sustainable health insurance system and to improve the MoH capacity to control performance, quality and costs of health care services.

The health sector has evolved organically in the absence of a clear development direction. The MoH has produced several planning documents. Institutional weakness of the MoH is a reality and its leadership has been undermined through the frequent turnovers of Ministers in the past years. A strategic plan for the sector is being elaborated in line with the objectives of the Palestinian Reform and Development Plan 2008 – 2010.

The Palestinian Reform and Development Plan 2008 – 2010 aims to a health quality and health care affordability improvement through the following main directions:

- Investment in the quality of individuals, organizations and physical facilities
- Building of strategic management capacity
- Reform of health financing

In that respect, training and investments in tertiary health care facilities are seen as a priority that will enable to reduce progressively the need for expensive referrals.

1.4 RELEVANCE OF THE PROJECT IN RELATION TO THE DEVELOPMENT POLICY AND THE INTERNATIONAL CRITERIA

As in many countries in the Western world, cardiac diseases in the adult population are the main cause of death (21.8% in 2006) in Palestine. Due to the restrictions, mortality and morbidity attributed to cardiovascular ailments increased significantly over the past ten years. Most patients with a cardiovascular history accumulate major cardiac risk symptoms such as tobacco-abuse, hypertension, diabetes, obesity and stress. Over 50% of those patients do not visit a primary cardiac care centre on a regular base. This makes ischemic heart disease the leading cause of cardiac-related mortality. Over the years CVD will become a heavy burden for the hospitals. Among paediatrics the picture of cardiac problems is not very clear. However, with a population of nearly 3.8 million people in the West Bank including Jerusalem and Gaza, a 2006 fertility rate of 4.6%, poverty, malnutrition and a high incidence of consanguinity, congenital malformations are the second leading cause of mortality amongst infants. Palestine is expecting 1500 newborns with congenital heart diseases in 2008, half of them will require surgical interventions. Based on a recent 2007 report

accumulated by Al-Makassed hospital it is estimated that there should be approximately 500 to 700 paediatric cardiac surgeries annually. Moreover, congenital anomalies will become more prevalent due to lack of essential hygienic conditions and preventive medicine. In light of the commitment of Belgium to the millennium developmental goals, addressing cardiac care for paediatrics is in line with reducing child mortality. Most births in Palestine (97%) take place in hospitals and clinics since the Palestinian Ministry of Health encouraged all women to give birth in a hospital. The 17 public hospitals in the West Bank and Gaza have become the place of birth for 56% of the 103.870 annual births, primarily for the poor. However, the increasingly overcrowded and under-staffed maternities have compounded the risk for birthing women, due to unpredictable lack of access to maternity facilities and sub-optimal perinatal care. The ongoing Israeli isolation of the Gaza strip from the West Bank has contributed to a situation of under-resourced and unregulated health services. Rising poverty, a daily reality for more than 80% of the population in Gaza, is an additional barrier concerning access to services in the non-governmental sector. In spite of these facts, high-risk cases and complications from the whole Gaza strip have no other choice than to be referred to a major neonatology service.

1.5 BELGIAN SUPPORT TO THE HEALTH SECTOR

The first phase of the Belgian tertiary health care program in Palestine consisted of the installation of a cardiac cath-lab in the Ministry of Health (MoH) hospital in Ramallah and a CT-scanner and a Neonatology unit in Shifa hospital in Gaza. Both projects were completed in 2000. Unfortunately at that time, proper training and adequate expertise of local caretakers were not considered of the outmost importance. This led to a slower start and temporary decay of the initial services until training and maintenance issues were more or less resolved.

The second contribution (Health II) comprised the installation of a cardiac cath-lab in the European Gaza Hospital (completed in September 2006) and the installation of a new intensive care/coronary care unit in the MoH hospital in Ramallah (finished in July 2005 and operational since).

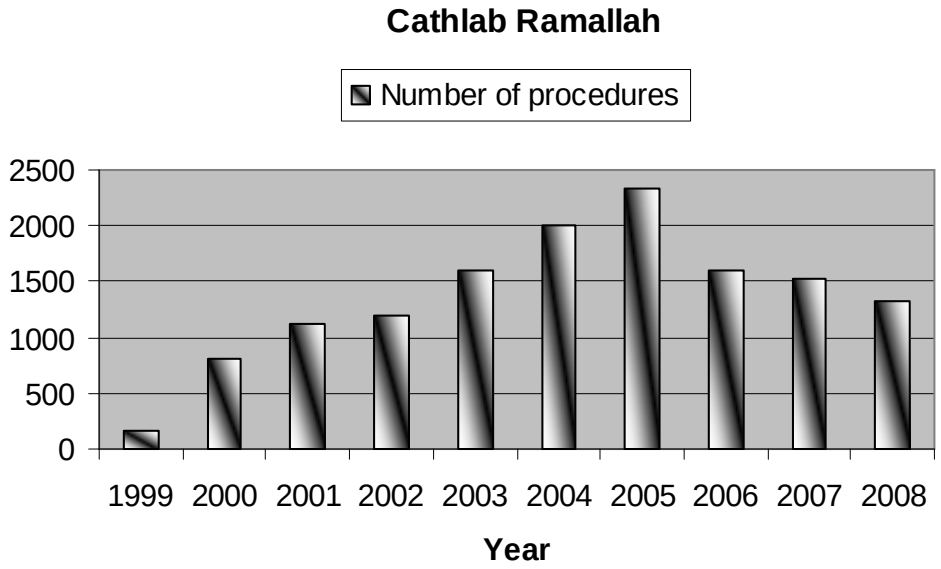
The agreed minutes of the second meeting of the joint committee on development cooperation between the Kingdom of Belgium and the Palestinian Authority mentions on page 5 (Indicative Development Co-operation programme 2002-2006) in article 2.1. Ministry of Health " to realise the National Goals and objectives of the Palestinian National Strategic Health Plan, Belgium aid will continue contribute to the improvement of the curative and preventive health care by reducint morbidity due to cardio-vascular diseases. The purposes of this Co-operation policy are: a. to upgrade existing cardiology facilities; to establish two preventive cardiology centres in Gaza and the West Bank; to upgrade the neonatology centre in the Shifa Hospital in Gaza; to enhance paediatric cardiology surgical human capacity. (Ramallah 12 November 2001).

At the Belgian-Palestinian cooperation joint committee meeting (July 7th 2005), Belgium confirmed its willingness to provide a grant to finance a new ICU/CCU and a new cardiac surgery department at the EGH in Gaza, to extend paediatric cardiologic care in Al-Makassed hospital in Jerusalem, to refurbish the cardiac surgery department at Ramallah hospital and the neonatology at Shifa hospital in Gaza, and to provide the required training components.

The ultimate goal for cardiac care is to create complete cardiac centres in all major geographic areas. The requirement of a cath-lab to be in close proximity to operating rooms, ICU and other support facilities make this option an ideal one.

2. STRATEGIC ORIENTATIONS

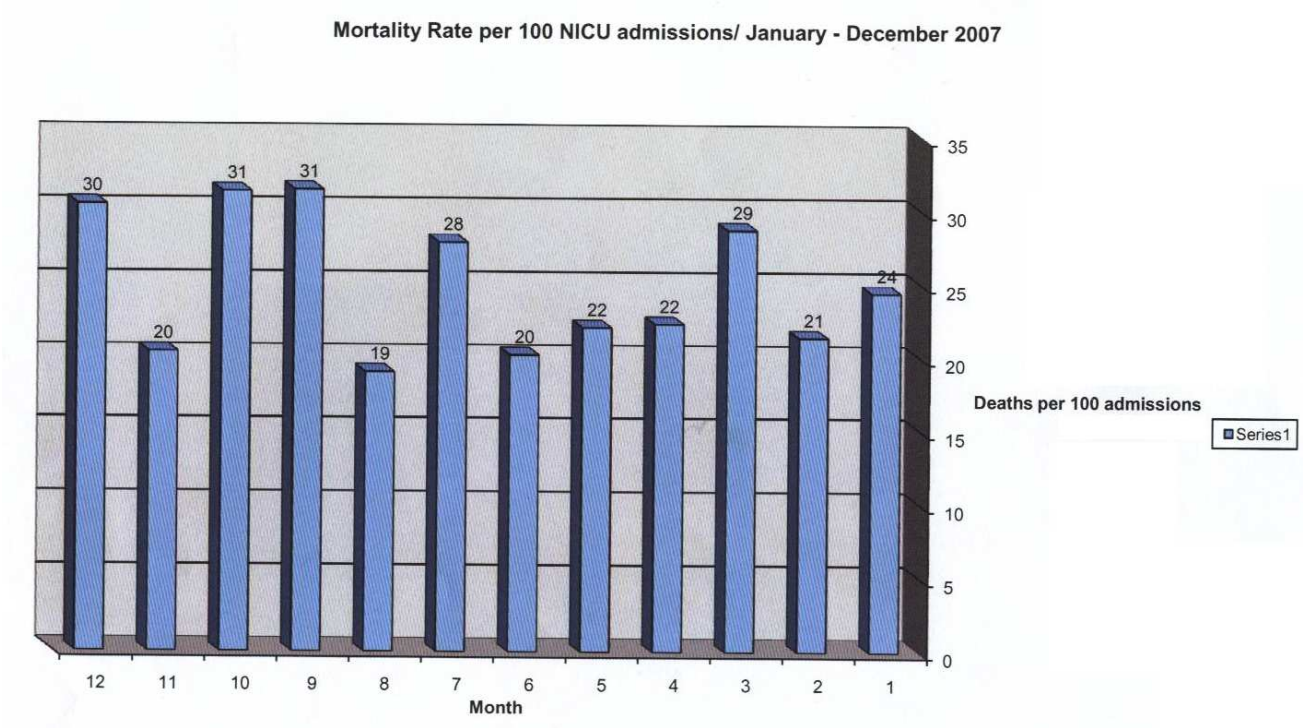
Belgium has already a significant experience in the field of tertiary health care in Palestine. In a first phase the Belgian Health Plan installed in 1998 a catheterization laboratory (cath-lab) in the Ministry of Health Hospital in Ramallah and a CT-scan and neonatology department in Shifa hospital in Gaza city (completed in 2000). After a difficult start the Ramallah cath-lab under the supervision of Dr. M. Batrawi is up to Western standards with excellent medical and financial results. The decrease in number of procedures since 2006 is due to the increasing travel restrictions, lack of supplies and the successful upstart of the Cath-Lab in the EGH (Table I).



A Neonatal Intensive Care Unit (NICU) should be specialized in providing high quality care for sick and premature newborns. The hospitalization of a newborn child is a stressful experience. With this in mind, each neonatal department should be dedicated to support the babies and their families during this difficult experience. Each NICU in Palestine should be able to meet the needs of premature and critically ill neonates from the area where it is established and should become a regional referral centre for newborn infants with severe illnesses, as well as serve as training centres to improve care at other hospitals. The staff of specialists, doctors, nurses, paramedical team and social workers should understand that a baby's illness involves the entire family. The location of the Newborn ICU immediately adjacent to the Labour and Delivery area enables a multidisciplinary team approach to complex perinatal problems, beginning with prenatal care and delivery room management, and providing a smooth transition to the institution of neonatal intensive care. To function effectively, the NICU should have state-of-the-art equipment and capabilities including high frequency ventilation, and should be staffed by experienced neonatologists, neonatal nurses and well trained neonatal resident doctors. The staff should be present 24/24 hours and observe the highest standards of medical care and hygiene.

By contrast, since the start the results of the NICU in Shifa hospital are less than optimal (32% mortality in 2004 based on a report of Dr. Keutgen August 2005). This stands in pure contrast with goal number 4 of the Millennium project to reduce child mortality by two-third by 2015 (projected mortality for neonatology 4-5%). The main reasons for the poor outcome in the neonatology department were a complete lack of experience and training of the under-staffed medical and

paramedical personnel and the lamentable hygienic conditions both in the obstetric and neonatology department.



In a second phase of the Health Plan, Belgium installed a new 8-bed intensive care/coronary care unit (ICU/CCU) in the MoH hospital of Ramallah that opened in July 2006. The entity is now running at full capacity (96% occupancy rate) with excellent results (0.1% of mortality in the year 2007 report of Dr. Mohammed Batrawi). Although initially candidates were hard to find, the adequate training of the staff personnel has made it possible to perform in a most efficient way. Since both cath-lab and ICU/CCU are operational and performing, the next logic step is to install cardiac surgery under the same conditions in order to be able to treat all adult patients with cardiac ailments and to complete the Cardiac Centre.

Another component of the second phase of the Health Plan resulted in the installation of a new cath-lab in the EGH in Khan Yunnis. Unfortunately the finishing of the cath-lab was delayed until November 2006 due to constraints from the Israeli side and outside agencies. With an average of 100 invasive procedures/month (June 2008 report of Dr. H. Zammar), the cath-lab is performing reasonably well despite the restrictions and the siege. In order to start interventional procedures (PTCA, stenting), an ICU/CCU is needed to monitor all critical cardiac patients conform the actual situation in the MOH hospital of Ramallah. Finally a full cardiac surgery department needs to be installed including the necessary operation rooms and monitoring devices. The latter two entities will need to be constructed adjacent to the cath-lab in order to ensure continuality of cardiac care in Khan Yunnis and thus create a complete Cardiac Centre.

Al-Makassed in East-Jerusalem is the only tertiary care centre in Palestine able to treat neonates and infants with congenital cardiac ailments. Recently the catheterization laboratory was renewed and an international program of paediatric cardiac surgery was started. Because of the increasing numbers of operations (190 in 2007-2008) the actual paediatric intensive care unit (4 beds) and the cardiology premises need extension to maintain the high quality standards necessary to ensure optimal paediatric cardiac care. The actual ICU comprises 7 beds in a space fit for 4 beds. However overcrowded ICU's are more likely to induce in-hospital infections.

3. INTERVENTION FRAMEWORK

3.1 GENERAL OBJECTIVE

The general objective of the project is to:

"To improve the global care in the Palestinian Autonomous Territories by reducing mortality and morbidity due to cardiac and congenital ailments in children and adults".

3.2 SPECIFIC OBJECTIVE

Thus the specific objectives of the project are:

To upgrade the diagnostic and therapeutic cardiac care facilities in three tertiary care hospitals (one in the Gaza strip, one in Jerusalem and one in the West Bank)

To upgrade the treatment capacity in one tertiary health centre in Gaza City

3.3 EXPECTED RESULTS

The four expected results of the project comprise:

R1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.
R2. Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended.
R3. A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department.
R4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.

3.4 ACTIVITIES

Throughout the 4 Intermediate Results, the activities consist of the following 3 stages:

1. Infrastructure
2. Equipment
3. Training

3.4.1 Result 1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre

3.4.1.1 Activity 1: completion of the infrastructure of the the European Gaza Hospital

This interesting hospital has a very good master plan and logic layout. The backbone of the facility is a large hospital street on each floor connected vertically by four elevators.

The street pattern is open-ended so that future expansion is guaranteed.

In the second phase of the Belgian-Palestinian health support project a Cathlab (Heart Catheterization Lab with supporting facilities) was successfully installed on ground floor level in the northern corner of the facility.

Next to this department, by initiative of the Authorities, an IVF section (In- Vitro Fertilization) was simultaneously planned and executed. For internal reasons the decision is taken not to abandon this facility, so that the area can be made vacant. The area concerned is similar to the surface of the Cathlab next-door, furthermore directly connected by an internal corridor.

The proposal is to install there a surgical facility of one Surgical Theatre (with potential for a second OT in the future), recovery, ICCU 8beds, utilities and ancillaries.

The configuration of the twin-unit Cathlab-Coronary Care Surgery is a very good set-up:

- Completely offside the main hospital street, but directly accessible from there.
- Short and direct internal corridor
- Located in a quiet part of the hospital with low traffic.

Given the location on ground floor with outdoor access the building works can be easily performed without significant disturbance for the hospital as a whole and for the adjacent Cathlab in particular. An efficient dust partition is to be in place between the two functions during the full works period.

In the zone of the Cathlab still a 5 patient room adjacent the hospital street was kept, a left-over of the precedent nursing unit. Given the advantage of a closed twin-unit Cathlab-Coronary Care Surgery, this space of about 55m² should be integrated in the new set-up, thus avoiding all external circulation into the new 'Heart Centre' layout. A couple of years of experience with the new set-up will indicate the best use for this spare area. This can be a PACU Post-Anaesthesia Care Unit, a pre-operative observation ward or an early mobilization physio-therapy room.

The cost is estimated at 722 m² à 580 €/m² = **418760 €**[1]

3.4.1.2 Activity 2: The necessary equipments for interventional procedures in the European Gaza Hospital are installed and functionnal

[1] in the final budget this amount is multiplicated by 110 %

The equipments proposed by the expert team necessary to make the department fully operational are listed and a financial estimation made.

The total cost is estimated at 971,200 Euro. [2]

3.4.1.3 Activity 3: Execution of a training program

Initial selection of appropriate personnel, training, and updating of knowledge and skills are central components to this project. For all specialized services there is an urgent need for extended training of physicians and nurses.

a) **Physicians needed for specialized services in the EGH Gaza:**

- 1 MD Cardiac Surgeons two additional years after completion of general thoracic surgery (6 years).
- 1 MD Cardiac Anaesthesiologist, two additional years after completion of general anaesthesiology.
- 2 MD Cardiac Intensivists, one additional year after completion of basic speciality (anaesthesiology or surgery).

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of physician training EGH

Persons	Euro per year	Total Man-Yrs	Total Euro
MD	22.500	6 years	112.500

b) **Nurses needed for specialized services in the EGH**

- 18 ICU Staff Nurses, 3 months external, 3 months local.
- 6 OR Nurses 3 months external, 3 months local.

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of nurses training EGH

Persons	Euro per month	Total MM	Total Euro
Nurses	1.500/m	72 months	108.000
Nurses	1.000/m	72 months	72.000

[2] All details on equipment in attachment 7.

3.4.2 Result 2. Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended.

3.4.2.1 Activity 1: Extension of the infrastructure of the Makassed Hospital Paediatric ICU

The operation here is simple but very meaningful.
The actual area of the PICU is overcrowded in so far that basic principles of hospital hygiene are in danger. So are the cots to near each other. The utilities are undersized. The strict discipline of the staff supervised by a renowned paediatric doctor has been able to overcome problems so far.

The intervention proposed is to enlarge the PICU area with one 4bed module taken on the adjacent orthopaedic/rehab ward. Of course the consequences there are to be considered by the hospital board.

A drawing, based on measurements in situ, shows the eventual new arrangement:

The utilities and a clean store are enlarged.
An extra isolation box is planned.
The PICU unit can be divided in two by a folding door adding comfort and cross-infection safety.
In total 8 children can be taken care of. The distance between the cots is safe and up to standards.

The estimated cost of the rehabilitation is 84 m² à 240 €/m² equals **20400 €**[3]

3.4.2.2 Activity 2: The necessary equipments for the Makassed Hospital Paediatric ICU are installed and functionnal

The equipments proposed by the expert team necessary to make the department fully operational are listed and a financial estimation made.

The total cost is estimated at 240,000 Euro.

3.4.2.3 Activity 3: Execution of A training program

a) **Physicians needed for the specialized services Al-Makassed Jerusalem:**

- 1 MD Cardiac Surgeon, one additional year after completion of adult cardiac surgery.
- 1 MD Cardiac Intensivist, one additional year after completion of basic speciality (anaesthesiology, paediatrics or surgery).

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of physician training Makassed

Persons	Euro per year	Total MY	Total Euro
MD	22.500	2 years	45.000

b) **Nurses needed for the specialized services in Al-Makassed Jerusalem:**

[3] in the final budget this amount is multiplicated by 110 %

- 6 ICU Staff Nurses, 3 months local if already board certified or externally.

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of nurses training Al-Makassed

Persons	Euro per month	Total MM	Total Euro
Nurses local	1.000/m	18 months	18.000

3.4.3 Result 3. a new Cardiac Surgery department in Ramallah at the MoH hospital is established in order to complete the Cardiac Centre by including the existing Cath-lab and Cardiology Department.

3.4.3.1 Activity 1 : completion of the infrastructure of the Ramallah Hospital for Cardiac Surgery

Some years ago a project of the Belgo-palestinian bilateral cooperation installed very successfully a Heart Catheterization Laboratory (Cathlab) and subsequently an Intensive Coronary Care Unit (ICCU).

These functions are situated on the first floor to the South.

Time has come to enlarge and complement this Coronary department with a surgical unit (operating theatres and recovery unit plus additional intensive care beds).

A last effort should be made to upgrade the coronary nursing unit.

This plan is feasible since a larger terrace on the North is available and constructible: it can receive two large operating theatres and even a larger 'hybrid' OT for combined imaging and interventional procedures. As this is a clear future trend in cardiac surgery, the space will be preserved for future equipment, funds permitting.

Given the configuration of the whole floor a large zone in the adjacent existing wing seems fit for the recovery zone and for the changing areas for the staff.

A sketch drawing illustrates the possibilities.

This drawing was made in absence of as built plans, but after careful observations on the site. Execution drawings will have to start from dressing the as built situation based on accurate full measurements on the spot.

The implementation of the plan requests a certain phasing avoiding all interruption or even disturbing of the Cathlab zone:

- First the construction of the roof over the terrace together with the related outer walls should be made.

- Second the finishing of the new operating area and the new recovery and changing zone can be implemented, without disturbing the southern part of the floor. All access (labour and materials) should come from the outside.
- The third part should be the new intensive care wing (East) with external access at ground level (sloped site).
- Eventually in a later phase the coronary surgical nursing unit can be upgraded (new toilets etc.).

Each building site should be airtight isolated from the active part of the floor, to avoid nosocomial complications.

Evaluation of the plan:

The final configuration of this cardiac floor suffices largely to actual modern hospital criteria, and will enhance the strength of the already exemplary Heart Catheterization Laboratory.

Phase One: Construction shell on terrace, 1° floor: 384 m² à 216 €/m² =	€ 82 944
Phase one and two: interior and building equipment: (384 m² + 352 m²) = 736 m² à 580 €/m² = No finishing of two OT's : 150m² à 520€/m	€ 426 880 *€ 78 000*
Phase three 210 m² à 480 €/m² =	€ 100 800
Phase four 320 m² à 440 €/m² =	€ 140 800
Total R1	**€ 673 424**[4]

3.4.3.2 Activity 2: Installation of the necessary equipments for the cardiac department of the Ramallah MoH hospital

The equipments proposed by the expert team necessary to make the department fully operational are listed and a financial estimation made.

The total cost is estimated at 971,200 Euro.

3.4.3.3 Activity 3: execution of a training program

a) **Physicians needed for the specialized services MoH Hospital Ramallah:**

- 1 MD Cardiac Surgeon, two additional years after completion of general thoracic surgery (6 years)
- 1 MD Cardiac Anaesthesiologist, two additional years after completion of general anaesthesiology.
- 2 MD Cardiac Intensivists, one additional years after completion of basic speciality (anaesthesiology or surgery).

[4] In the final budget this amount is multiplicated by 110 %

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of physician training Ramallah

Persons	Euro per year	Total MY	Total Euro
MD	22.500	6 years	112.500

b) **Nurses needed for the required specialized services MoH Hospital Ramallah.**

- 12 ICU Staff nurses, 3 months local.
- 6 OR Nurses, 3 months local.

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of nurses training Ramallah

Persons	Euro per month	Total MM	Total Euro
Nurses	1.500/m	72 months	108.000
Nurses	1.000/m	72 months	72.000

3.4.4 Result 4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.

3.4.4.1 Activity 1: Improvement of the infrastructure of the neonatology department of the Shifa Hospital

A. The NICU building:

The original NICU building was part of the first phase of the Belgian-Palestinian health support project. It is located very near and linked to the already existing Gynaecology and Maternity department, on the leftover piece of land formed by the angle of the Ward and the Surgical-Obstetrics wing. The NICU building has almost no expansion horizontal possibility.

The existing building has no vertical circulation dedicated to the care area. The only connection is one peripheral open staircase. An elevator shaft is still empty, but is anyhow in the wrong place.

Another very weak point is the absence of a Paediatric Department inside the Shifa campus.

In 2005 a thorough study was made to encompass the shortcomings of the NICU building after reporting dramatic hospital mortality of neonates.

Besides important measures in staffing, management and equipment, a full proposal was made to adapt the building. A main feature was to separate strictly the premise in a soiled and a clean area, by adding a third floor and an elevator inside the clean area.

The full proposal is documented in:

Since 2005 the situation in Gaza has drastically changed and forcibly the proposal of 2005 has to be brought to a more actual and realistic approach as of today. Nevertheless all interventions in the building now should keep open the long-term perspective expressed in the earlier report.[5]

After careful consideration of the situation, taking in account the actual personnel and means available, the experts concluded to give the highest priority to the training of appropriate staff, to upgrade or renovate selected equipment and to limit building measures now to a minimum.

The previous idea to add an extra floor is in the actual context abandoned:

- Actual team is not able to care for more premature babies.
- Department has not to act as transit paediatric department.
  A strong collaboration policy with the nearest paediatric hospital is essential.
- Budgetary priority has to go to training of doctors and of nurses.
  Only with highly skilled staff better results can be expected whatsoever.

Nevertheless following building prerequisites should be aimed at:

Distance between cots or incubators should be respected at all times:

- Critical care 185cm
- Intermediate Care 155cm
- Basic care 95cm

Hospital hygiene measures are compulsory: scrubbing when entering a service and hand hygiene before and after each patient contact.

In the long run the service should be physically divided into the public area (soiled) and the patient care areas (clean):

- Dedicated vertical circulation inside clean zones.
- Changing 'thoroughfare' rooms to the clean zone for nursing staff and selective relatives.

As this request important building remodelling, this ideal is not feasible in the actual context.
Therefore an utmost attention should be paid to hospital hygiene discipline of all staff, doctors and nurses, and to compulsory rules for relatives and visitors. Compared to the actual daily functioning, the results hereof can be impressive.

For the total costs estimates: construction and rehabilitation plans are not yet defined. Therefore a lumpsum of ***40 000 €*** is foreseen. [6]

B. Obstetrics-Maternity building:

Deliveries take place on the first floor.

Caesarean deliveries occur at the ground floor in operating theatres.

Both floors have a connection to the NICU building.

[5] BTC-CTB Reinforcement of the Tertiary Health Care in Palestine. Extension of the Neonatology department in Shifa hospital Gaza. Savings generated from Health II Project. Report of the 1st mission of Prof.dr.ir Jan G. Delrue 2005
[6] in the final budget this amount is multiplicated by 110 %

In Obstetrics, notwithstanding the precarious working conditions, the clinical results were impressive mainly due to well-motivated and skilled staff.

The equipment seamed to be mostly worn-out.

Given the limited budgetary possibilities not allowing major changes in the building, some rehabilitation of the Obstetrics building, including replacement of scrub-sinks and utilitarian working tables, seem fully justified.

Before acting on both buildings, NICU and Obstetrics, a clear clinical option is to be taken on the future role of the complex, and subsequently a detailed survey and architectural study is to be performed.

3.4.4.2 Activity 2: The necessary equipments for Shifa Neonatology are installed and functionnal

The equipments proposed by the expert team necessary to make the department fully operational are listed and a financial estimation made.

The total cost is estimated at 279,000 Euro.

3.4.4.3 Activity 3: execution of a training program

a) **Physicians needed for the specialized services in Shifa Hospital :**

- 2 MD Neonatologists, one additional year after finishing paediatric speciality

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of physician training

Persons	Euro per yr/month	Total MY	Total
MD	22.500 /y	2 years	45.000

b) **Nurses needed for the required specialized services inShifa Hospital:**

- 2 Neonatal Head nurses, two years including public health, infectiology and hospital management.
- 10 Staff nurses, 6 months externally

Outline for training abroad

The outlines for these trainings are fully documented in annex 7.7.

Costs of nurses training Al-Shifa

Persons	Euro per yr/month	Period	Total
Head Nurses	10.000/y	4 years	40.000
Nurses	1.500/y	60 months	90.000
Practical nurses	500/y	30 months	15.000
Fee University of Bethlehem	23.000/y	2 years	46.000

3.5 INDICATORS AND MEANS OF VERIFICATION

From the beginning of the intervention a monitoring and evaluation system will be introduced. The most important stakeholders, hospital administrators and the expert caretakers will discuss and report the principal indicators of good quality health care to the government services involved.

The creation of a national medical database on clinical outcomes is of the outmost importance. It could serve as a role model for other medical specialties outside the field of this project. It will be important to develop a number of process indicators in order to monitor the financial implications of highly specialized services.

The following indicators and means of verification are identified for measuring the impact on the level of the specific objective.

Specific objective	Indicators	Means of verification
To upgrade the diagnostic and therapeutic cardiac care facilities in three tertiary care hospitals (one in the Gaza strip, one in Jerusalem and one in the West Bank) To upgrade the treatment capacity in one tertiary health centre in Gaza City	- At the end of the intervention the 3 cardiac centres do completely offer the expected care. - Mortality of Shifa NICU is reduced by 50%.	- National Database (to be extended to all medical specialities) - MoH Annual reports - Hospital records - Project reports

The following indicators and means of verification are identified for measuring the achievement of the expected results.

Results	Indicators	Means of verification
R1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.	- The cardiac Surgery at EGH is operational - The ICU at EGH is operational - Peri- and post-operative cardiac mortality and morbidity comply with international standards.	- National Cardiac Database - EGH Hospital records
R2. Therapeutic capacity at the Paediatric Intensive Care Unit in	- Al-Makkassed PICU is extended	- National Cardiac Database - Makassed hospital records

Jerusalem at Makassed hospital is extended.	- Mortality in PICU is decreased by 10% - Paediatric Cardiac Morbidity	
R3. A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department.	- Ramallah Cardiac Surgery is established - Mortality - Cardiac Morbidity	- National Cardiac Database - Ramallah hospital records
R4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.	- Shifa hospital NICU is refurbished and performs according to international standards - Mortality in NICU is decreased by 50% - Premature intake rate	- National Database on neonatology - Shifa Hospital records - Bethlehem University surveys

3.6 DESCRIPTION OF BENEFICIARIES

- The main partner will be the Palestinian Ministry of Health. The Ministry of Health has seen the project as an important priority in the strategic health care plan for the coming five years (2008 letter of the MOH strategic health care in annex).
- The Ministry of Planning and Cooperation will be in charge of the global follow up of the project within the General Cooperation agreement between the Belgian government and the Palestinian Authorities.
- The identified beneficiaries are all Palestinian patients with cardiac ailments and neonates and infants.
- The respective hospitals directions and medical staff will actively participate in the implementation of the whole project.
- The Ministry of Health together within external experts from BTC will draft a list of potential medical and paramedical candidates to be trained. Proper training is a key issue. The duration of the training will depend on the level of expertise of the candidate and the nature of his specialization. It is likely to be confined to 3 months until 2 years of training abroad.
- The Engineering and Maintenance department of the MOH will supply assistance within the existing hospital premises if possible. Maintenance contracts with international medical equipment suppliers will be made. Local branches or representatives will ensure proper maintenance after the completion of the project.

4. RESSOURCES

4.1 FINANCIAL RESSOURCES

4.1.1 Palestinian Contribution

The contribution of the Palestinian Authorities will be distributed through the reular national channels. The MoH will bear the salaries of the medical and technical staff involved. The Palestinian contribution also consists in providing the offices for the proposed actions.

The overall contribution has been estimated at 1.750.000 Euro.

4.1.2 Belgian Contribution

The resources for the project implementations will be provided by the BTC and amount to 5.000.000 Euro. The execution modalities are both co-management and direct management.

4.1.3 Budget (see below)

4.2 HUMAN RESSOURCES

Besides the BTC headquarter staff in Jerusalem, under the supervision of the resident representative, the following resources are foreseen:

1. National Project director. The MoH with non-objection of the BTC assigns the director.

2. Project Co-director, recruited by the BTC and accreditated by the MoH.

3. Short-term international consultants for provision of technical expertise and project backstopping.

BUDGET TOTAL				Mode d'exéc.	BUDGET TOTAL	2009	2010	2011	2012	2013
A			**Create services in three tertiary health care centers in order to treat children and adults with cardiac ailments in Gaza, Jerusalem and West Bank.**		**4054242,4**	**162000**	**3568242**	**162000**	**162000**	**0**
A	01		A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.		1724336	73125	1504961	73125	73125	0
A	01	01	The infrastructure of the the European Gaza Hospital is completed	comanagment	460636		460636			
		02	The necessary equipments for interventional procedures in the European Gaza Hospital are installed and functionnal	regie	971200		971200			
		03	A training program is executed	regie	292500	73125	73125	73125	73125	
A	02		Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended.		325440	15750	278190	15750	15750	0
A	02	01	The infrastructure of the Makassed Hospital Paediatric ICU is extended	comanagment	22440		22440	0	0	0
		02	The necessary equipments for the Makassed Hospital Paediatric ICU are installed and functionnal	regie	240000		240000			
		03	A training program is executed	regie	63000	15750	15750	15750	15750	0
A	03		A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department.		2004466,4	73125	1785091	73125	73125	0
A	03	01	The infrastructure of the Ramallah Hospital is completed for Cardiac Surgery	comanagment	740766,4	0	740766,4	0	0	0
		02	The necessary equipments for the cardiac department of the Ramallah MoH hospital are installed and functionnal	regie	971200		971200			
		03	A training program is executed	regie	292500	73125	73125	73125	73125	
B			**Upgrade the treatment capacity in one tertiary health care centre in Gaza in order to improve clinical outcomes for neonates**		**559000**	**59000**	**382000**	**59000**	**59000**	**0**

B 01		Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.		559000	59000	382000	59000	59000	0
B 01	01	The infrastructure of the neonatology department of the Shifa Hospital is improved	comanagment	44000	0	44000	0	0	0
	02	The necessary equipments for Shifa Neonatology are installed and functionnal	regie	279000		279000			
	03	A training program is executed	regie	236000	59000	59000	59000	59000	
X		**Budget reserve (max 5% total activities)**		**48679,5**					
X 01		*Budget reserve*		*48679,5*					
X 01	01	Budget reserve COGESTION	comanagment	27362,5					27362,5
X 01	02	Budget reserve REGIE	regie	21317					21317
Z		**general means**		**338078**	**124049**	**114429**	**59800**	**39800**	**0**
Z 01		*Frais de personnel*		*170458*	*68429*	*68429*	*16800*	*16800*	*0*
Z 01	01	National Director	comanagment	24000	6000	6000	6000	6000	0
Z 01	02	Co-Director	regie	24000	6000	6000	6000	6000	0
Z 01	03	Administrative andFfinancial Officer	comanagment	19200	4800	4800	4800	4800	
Z 01	04	Local architects bureau	comanagment	103258	51629	51629			
Z 02		*Investments*		*9.620*	*9620*	*0*	*0*	*0*	*0*
Z 02	03	Equipement IT	comanagment	9620	9620				
Z 03		*Operational expenses*		*20000*	*5000*	*5000*	*5000*	*5000*	*0*
Z 03	02	Maintenance and office costs	comanagment	10000	2500	2500	2500	2500	
Z 03	03	Vehicle operationnal costs	comanagment	10000	2500	2500	2500	2500	
Z 04		*Audit - Follow up - Monitoring*		*138000*	*41000*	*41000*	*38000*	*18000*	*0*
Z 04	01	Monitoring and follow up costs	regie	40000	5000	5000	25000	5000	
Z 04	02	Audit	regie	20000		10000		10000	
Z 04	03	Backstopping	regie	78000	36000	26000	13000	3000	
TOTAL				**5.000.000**	**345049**	**4064671**	**280800**	**260800**	**48680**

5. IMPLEMENTATION MODALITIES

5.1 MANAGEMENT MODALITIES

The project will be managed according to the principles of partnership and joint implementation and embedded in the framework of the Palestinian Health Strategy Plan regarding the tertiary heath care sub-sector.

Project funds are jointly managed by the partner country and BTC, according to the following three principles:

- The Palestinian Authority is the project owner and has the contracting authority where applicable;
- BTC ensures the appropriate use of the project funds and the respect of its procedures, and it contracts the necessary expertise (codirector, technical advisor);
- The project is managed according to procurement regulations of the World Bank7 for the funds in co-management and according procurement regulations of the Belgian Technical Cooperation for the funds in direct managment.

The rule of "co-management" applies to infrastructure expenditures. The international expertise, backstopping, international scholarships and trainings, acquisition of equipments, reviews and audits, will be managed according to the 'direct management mode' by the Belgian Technical Cooperation.

5.2 LEGAL FRAMEWORK

5.2.1 Administrative coordination

The Specific Agreement (SA) signed between the Palestinian and the Belgian Parties determine the legal framework of the project.

The Palestinian Authority designates the Ministry of Health (MoH), through its Directorate-General International Relations, as the administrative entity responsible for the implementation of the project.

The Ministry of Planning (MOP) has the responsibility to supervise the financial aspects of the Specific Agreement (SA) on behalf of the Palestinian Party. It will authorize the financial flow to the project.

The Directorate-General for Development Cooperation (DGDC), under the Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation", has the responsibility to monitor policy issues and respect for the SA on behalf of the Belgian Party. The DGDC shall exercise this role through the Attaché for International Cooperation at the Belgian Consulate in Jerusalem.

As agency charged by the Belgian Party to perform its commitments in the facilitation of formulation, implementation and follow-up of the project, BTC will be responsible for monitoring all expenditures made under the Belgian budget and provide technical backstopping to the

[7] The feasibility to adopt the Palestinian procurement procedures is currently examined. Based on the results of the analysis, the Project Steering Committee will decide on adopting the Palestinian procedures.

implementation of the project in the field. BTC shall exercise this role through its Resident Representative in Jerusalem who is the co-authorizing officer of the project.

5.2.2 Technical coordination

Institutions responsible for the technical input during the project implementation are :

- MoH / Directorate International relations
- MoH / Engineering Department
- MoH/ Biomedical Maintenance Department
- Directors of Hospitals West Bank and Gaza
- Head of departments of the different concerned Hospitals
- BTC

The MoH through the Directorate International relations will be the first responsible for the achievement of the project results. He will care for the embeddedness of the project activities within the Palestinian Health Strategy Plan. He will recruit the project director, with the agreement of the BTC Resident Representative in Jerusalem. The Directorate will be particularly involved in helping the designing of the training plans, and selection of candidates according to the identified training needs.

The Engineering and Maintenance Department will be responsible for the implementation of the project infrastructures in accordance with the existing plans and procurement procedures.

The Directors of Hospitals will be responsible for the facilitation, coordination and supervision of implementation of all activities of the project within their respective institution.

5.3 IMPLEMENTATION STRUCTURES

The overall execution of the program will be undertaken by the Directorate International Relations / MoH who will assign a Project Director. That will entail the following responsibilities:

- Ensuring that the project activities are in accordance with acceptable quality standards
- Providing the technical assistance and managerial support needed, the appropriate designs and technical documents, and supervising the works in the field;
- Following up on project implementation and providing overall supervision of implemented activities.

5.3.1 Project Steering Committee

The **Project Steering Committee** (SC) represents the highest co-ordination level of the project. It is responsible to provide the necessary strategic guidance to all project implementers and ensures that project objectives are timely achieved.

The composition of the Steering Committee is as follows:

- The Minister of Health (chairperson)
- A representative of the Directorate-General International Relations, Ministry of Health;

- A representative of the Engineering and Maintenance Department, Ministry of Health (observer)
- a representative from the Ministry of Planning (authorizing officer) ;
- The BTC resident representative (co-authorizing officer);

The Project management team, (director and co-director) will ensure *the secretariat* of the Steering Committee.

Any of the members might delegate his/her authorities to a representative in writing.

The Steering Committee may invite, *as observers* or experts, any other person contributing to the project, like for example the Technical Advisor responsible for the technical backstopping, the directors of the benefiting hospitals and the local technical staff.

The steering committee core duties are:

- Supervise on the approval of the TFF
- Supervise on the execution of contributions of both parties
- Appraise progress of the project and the achievement of its specific objective on the basis of the progress reports;
- Approve annual work plans and budget;
- Approve any necessary adjustment or modification in the intermediate results and their respective budgets, in compliance with the agreed specific objective and the total budget of the project;
- Formulate recommendations on necessary modifications in project design
- Approve the financial audits and the monitoring reports;
- Formulate recommendations on possible necessary changes in the Project components, budgets and future directions; and
- Approve the changes proposed related to the composition and responsibilities of the Steering Committee and the mechanism to change the TFF.
- Approve the final report and close the Project and agree on transfer of property at the end of the project.

5.3.2 Project Management Unit (PMT)

The second management level consists of the **Project Management Team** (PMT). The PMT is responsible for the daily implementation of the project. It is responsible for the good governance of all project resources (human and material). It provides conceptual inputs with regard to project design & strategy and makes policy recommendations.

The PMT will be mandated to verify whether activities are properly implemented, mobilize & guide the project implementers and coordinate with government institutions and offices on all aspects affecting the project.

The PMT will be supported by the MoH in the implementation of its tasks.

The Project Management Unit (PMT) will report to the Steering Committee.

The PMT will be limited to the following members:

- The Project Director (appointed by the MoH, Directorate General International Relations, with the agreement of BTC);
- The Co-Director (recruited by BTC representation with the agreement of the Palestinian counterpart);
- An administrative and financial officer;
- The PMT assures the coordination and day-to-day management of the whole project.

The PMT is responsible for:

- Planning, coordination and execution of the day to day project activities;
- Supervision and monitoring of the implementation of activities
- Providing activity budgets and work plans
- Providing financial management, accounting and timely compilation of progress reports and budgeted work plans for the following period for consideration by the SC;
- Compiling data for the project final report at the end of the project;
- Coordination and networking with other national and international partners.

The main technical responsibilities of the National Project Director are:

- Supervise and coordinate the implementation of the project to ensure that the activities are implemented in accordance with the TFF and approved annual work plans and budgets.
- Liaise with tertiary health sector strategy and plans and guarantee the link between operational work at the periphery level and feedback to policy-making and -adapting process.
- Monitor together with the accountantAdministrative and Financial Officer, the contracts of engineers and consultants
- Establish, together with hospital and technical Directorate (cardiology, neonatology) at central level the training needs, plan, and follow-up of their implementation
- Ensure that annual and semi-annual consolidated work plans and reports are produced and submitted in time to the JLPC
- Coordinate the intervention with other projects.

The main technical responsibilities of the project co-director are:

- Supervise the preparation and tendering of contracts for procurement of works, goods and services;
- Follow up of the infrastructure works
- Follow up on the quality of the works..
- Supervise financial management as co-director of the project

The administrative and financial officer main tasks are as follows:

- Ensure proper financial management of the project
- Ensure the respect of the BTC internal rules of Financial Management of Projects
- Coordinate accountancy
- Be responsible for the financial reporting
- Check conformity to the plan and TFF before forwarding the expenditures for approval to the project director and co-director
- Consolidate the financial information at project level

He will be under supervision of the National Project Director, recruited in BTC direct-management and under the hierarchical responsibility of the BTC Resident Representative.

5.4 FINANCIAL PROCEDURES

5.4.1 Palestinian contribution

The contribution of the Palestinian Parties will be distributed through the regular national channels. The Ministry of Health will bear the salaries of the medical and technical staff involved. The Palestinian contribution also consists in providing the offices for the proposed actions. The overall contribution has been estimated at 1.750.000 €.

5.4.2 Belgian contribution

The Belgian contribution will be managed in two different modes indicated as:

- Co-management
- BTC direct-management

5.4.2.1 Bank accounts and authorizations

A 'main project account' in Euro shall be opened for the co-managed Belgian contribution under the Ministry of Finance single treasury, at a local commercial Bank.

The signatories of this account will be the Palestinian authorizing officer (MOP) and the BTC Resident Representative in Jerusalem as Co-authorizing officer, or their delegates.

On a quarterly basis, based on the financial planning, approved by the PMT, BTC Brussels will replenish this account.

The project will also open an operational project account at a commercial bank, for the daily expenses of the project. This account will be activated through the joint signature of the project director and co-director. This operational account will be used for expenditures under the threshold of 12.500€. Above this amount, the main project account will have to be used.

This operational account will be replenished every month following the BTC procedures, at the demand of the director and co-director.

For the expenditures in direct management, a bank account can also be opened in a local bank, the signatories being the co-director of the project and the resident representative, or their delegates.

5.4.2.2 Request for funds

For the main account

From the moment an implementation agreement is signed between the Belgian State and BTC, a first request for funds can be done. The requested amount should correspond to the financial needs of the first three months and will follow the BTC procedures.

To receive the following requests, the director and co-director of the project must introduce to the BTC Representative in Jerusalem a cash call at the beginning of the month before the next quarter.

This cash call must be signed by project director and co-director and approved by Authorising & co-authorising officers.

The amount of the cash call is equal to the needs estimated in treasury for the following quarter following with a cash buffer. The transfer of funds by the BTC is done at the beginning of the quarter.

The transfer of the funds is done only if:

- The accounting for the previous must have been closed.
- An updated financial planning of the current quarter was transmitted to and validated by BTC Representative.

For the project account

The project account will be replenished by the main accounts on a regular basis, according to the needs (see reporting hereinafter).

5.4.2.3 Financial reports

Budget follow-up reports

The project will follow up the BTC internal procedures.

The PMT shall send a monthly Financial reporting to BTC Jerusalem together with a copy of all related invoices, receipts, and supporting documents. BTC should control, verify and send its feedback report to the PMT and MoH. BTC Jerusalem will then approve and send the Financial report to BTC Brussels.

Any needed corrections should be adjusted and rectified in the next month's accounting period.

Financial planning

Every quarter, the PMT will prepare a financial planning for the current quarter and upcoming quarters of the current year and the future years.
The financial planning must be done in accordance with the BTC internal procedures and must be sent to the BTC Representation in Jerusalem.

Accounting

The accounting of the project must be elaborated and approved following the BTC internal procedures. The accounting must be signed by the director and co-director and send to the BTC Representative.

The following must be forwarded by the project to the BTC Representative:

- Electronic account files.
- Bank statements and signed cash statements.
- All supporting documents (originals).
- Justifications (complete files) of the registered replenishment of the districts bank accounts.

Other financial reports

At the SC meetings, the director and co-director will present the following financial information's:

- Budget monitoring reports
- Updated financial planning's
- List of the main engagements
- Bank accounts statements
- List of the received funds
- Budget change proposal if needed
- Action plan related to audit requirements

5.4.2.4 Budget Management

The budget of the project gives the budgetary constraints in which the project must be carried out. Each change of budget must be approved by the SC on the basis of proposal worked out by the PMT. The possible budgetary changes are:

- Change of the budget structure
- Transfer of resources between existing budget lines
- Use of the reserve (the budgetary reserve can only be used for activities of project and after agreement of the SC. Its use must always be accompanied by a change of the budget.)

The management of a budget change must be made according to the BTC procedures.

The total budget amount cannot be exceeded. If a budgetary increase is necessary, a justified request for increase must be introduced by the Palestinian part at the Belgian State after having received the agreement of the SC. If Belgium accepts the request, the two parts must sign an exchange of letters.

5.4.2.5 procurement

Co-management

The World Bank procedures on Public Procurement will govern the procurement on infrastructures.

At the very beginning of the project the feasibility and the modalities for adopting the Palestinian procurement procedures will be examined (through a study external to the project). The PMT will follow up the analysis of Palestinian tendering procedures and will propose the necessary changes to the TFF to the Steering Committee if a switch is made to the Palestinian procedures. Up to that time, the World Bank procedures on Public Procurement will govern the procurement.

However, the specific conditions and all communication related to the tendering shall be always conducted in English. The BTC Co-director or his/her representative will be an observer in the tender committees.

All contracts, invoices and payments to be charged on the co-managed Belgian contribution must be endorsed in writing by the Project Director and the Chief Technical Advisor.

Any contract or single expenditure above 12.500 Euro must be approved by the BTC Resident Representative.

BTC direct -management

For the other budget lines, such as the Technical advisor, the technical backstopping by BTC, the audits and other monitoring and evaluation activities will be managed in direct BTC management ("régie") according to the Belgian procurement regulations.

Nevertheless the procurement of works, supplies and consultancies in BTC diirect managment will be conducted in close collaboration with the Palestinian counterpart.

5.4.2.6 Regulations on personnel recruitment

The MoH assigns the project Director. The local staff is recruited as per the national rules and regulations. The international technical advisors for backstopping, evaluation and auditing are recruited by the BTC as per Belgian rules and regulations. The provisions of the General Agreement signed between the Palestinian Authority and the Belgian Government shall prevail.

5.5 MONITORING AND EVALUATION

5.5.1 Monitoring

The PMT will be responsible for the coordination of the planning between all partners and the establishment of the project working plan and budget that will be presented by the Project Director to the SC during the first three months of the project.

The supervision and backstopping to monitoring of activities will be a responsibility of the Project Director.

An annual report will be produced according to the BTC templates and endorsed by the SC.

The PMT will compile the information for the six-monthly implementation reports (semi-annual review of the planning), which will be presented to the SC.

5.5.2 Evaluation

An external mid term review will be conducted at the end of the project's second year. The terms of refernce will be prepaped by the PMT and forwarded to the SC for approval. The main objective of the mid-term review is to assess the progress of the project activities against planning (efficiency) and the extent to with the results and objective are going to be achieved during the course of the intervention (effectiveness). The review will also examine the financial, institutional and managerial setting of the intervention. The mission will formulate recommendations for the second half of the projects. It will insist in particular on the mechanisms that have been / or should be put in place to ensure sustainability of the results. Its findings and recommendations will be presented to the SC.

5.5.3 Technical backstopping missions

International consultants will provide technical backstopping for specific aspects of the project. A provision is made also for periodical backstopping from BTC headquarters according to the needs. Identified backstopping expertise are to be organised for follow up on Infrastructure and equipments (6 missions) and for bringing and follow up of the development of the Medico-technical expertise.

5.5.4 Audits

a) BTC Audit

Each year auditors audits the accounts of the BTC. Within this framework, they may also carry out audits of projects in the Palestinian Territories.

b) Project Audit

External monitoring missions will be organised on a yearly basis. A qualified financial and administration expert who is to be selected jointly by both parties and contracted by BTC will execute the external auditing. The SC asks the BTC Representative in Jerusalem to define the terms of reference and to select the firm of audit, including:

- Evaluation of the existence and the respect of procedures
- Evaluation if the accounts of the project reflect reality

Reports of the auditor and the monitoring mission will be forwarded to the SC.

The SC can require additional audits if necessary.

5.6 Changes to the TFF

As long as the specific objective, the duration and the total budget of the project mentioned in the Specific Agreement don't change, the BTC together with the MoH decide in common agreement on necessary amendments to the technical and financial file.

For amendments related to the following aspects, the approval of the Steering Committee is required beforehand:

- Intermediate results of the logical framework and their respective budget;
- Project implementation modalities;
- Competences, attributions, composition and mode of functioning of the Steering Committee
- Motivational and approval mechanisms for the adaptations made in the technical and financial file
- Result and specific objective indicators of the project;
- Financial modalities regarding the set up of the contributions by the parties.

BTC and MoH shall inform the Government of Belgium (through the Counsellor for Development Cooperation) about these modifications.

Whenever the modifications involve changes of the specific objective, the total budget and/or the duration of the specific agreement an exchange of letters is required between the Palestinian Party and the Government of Belgium.

5.7 Ending the cooperation activity

During the last phase of the project all parties will ensure that the following actions are taken:

- An end-of-project report has been presented to the SC;

- Destination of remaining assets and budget is agreed upon;
- Preparations for the closure of accounts have been made.

The PMT shall compile and prepare a general end-of-project report that can be presented and discussed at SC before the project comes officially to a close. Its final version will include the minutes of this SC meeting including the remarks made about content and conclusions of the end-of-project report.

The end-of project-report shall give a full account of the expenditures of both the Palestinian and the Belgian contributions. It must include a list of all equipment to be handed-over. The SC will approve the plan for handing over the equipment bought from the Belgian contribution.

Amounts managed with BTC-responsibility and not used at the end of the project, and the balance of the financial contribution not send on project bank accounts will fall in cancellation at the end of the project. The balance of the project bank accounts in co-management will be allocated by mutual agreement.

After the remaining budget has been transferred according to the decision of SC, both authorizing officers of the project will take all necessary steps described by law and banking procedures, to close all project accounts. Documents confirming the closure of the accounts shall be copied to the BTC Brussels and MoH.

After the end of the Specific Agreement, no expenditure will be authorized except if they are related to commitments entered into before the end of Specific Agreement and who are acts in the statement of the SC.

6. CROSS CUTTING THEMES

6.1 ENVIRONMENT

No environmental issues related to the clinical outcomes are expected other than those resulting from standard hospital procedures. The project takes into consideration the effect of all interventions on the surrounding environment in the structural phase minimizing environmental waste as well as paying special attention not to increase the environmental pollution. There is a national project supported by the UNDP involving Ramallah hospital for waste management and hence the project will capitalize on the new system and standards in the inputs and services put in place. Makassed hospital being in Jerusalem is restricted by the Israeli local authority on waste management and environmental pollution standards. Gaza on the other hand remains a challenge but looking into environment and increasing environmental hazards is an imperative part of the intervention.

6.2 GENDER

The beneficiaries of this project will be men and women, children both boys and girls among the Palestinian population affected by non communicable diseases especially cardiac problems and in the case of children congenital cardiac anomalies.

In case of neonatal treatment:

- Concomitant health issues of pregnant mothers or women giving birth will be addressed.
- Particularly all potential infectious sources are to be eradicated.
- A mother-child family training in essential aseptic procedures is to be taught.

At the level of capacity building of human resources the project is paying specific attention to a gender balance in the recruitment and further training of health professionals at the various levels.

For example the cardiac surgeon candidate for pediatric surgery is a female doctor, the nurses for the ICU; CCU will be both females and males. The cardiologists that need further training from Gaza are also one female and two males. Some specialties, such as cardiac perfusionist or anesthetist, do not seem to attract females in the country and through this project females will be encouraged to apply for these specialties.

6.3 SOCIAL ECONOMY

Economic changes in the occupied Palestinian Territories, such as high levels of poverty and unemployment, accompanied by insufficient financial support, resulted in many financial and administrative problems in the health sector. In 2006, the gross national product decreased by 4.8% while unemployment rose to around 22% (50% of the population of the Gaza Strip and 15% in the West Bank). The poverty level was more than 65% (49% of the population in the West Bank and 79% in the Gaza Strip, of whom 47% suffer from extreme poverty) as a result of Israeli practices, making it very difficult for individuals to pay health expenses, laying yet another burden on the Ministry of Health. During the first half of 2007, the deficit faced by the Palestinian authority amounted to US$ 100 million per month.

In light of what has been said about health financing in Palestine it is worth mentioning that this intervention will in fact secure access to health services for the various social classes in Palestine, thus making cardiac health services available to the rich and the poor equally as well as to women, men and children.

The establishment of the cardiac service in Ramallah will secure access to services under the MoH. And the MoH will also secure referrals to Makassed hospital for children. In Gaza the services are secured under the MoH services which guarantee accessibility to all provided they enter the health insurance system or are insured through tier work or private insurance companies.

For the marginalised the health insurance can be waived with proof of social welfare status while on the other hand the health insurance system as it stands can be paid in instalments amounting to a total of aprox 180US dollars max per head of household.

- The intervention will increase the accessibility to all the specialized care units for all levels of the population but particularly for the social less favorable.
- It will improve the level of all local care-takers from a secondary care to a tertiary care level in neonatology and cardiology.
- It can initiate a sustainable high-care system in a country in transition.
- It could be an upstart for a more elaborated social security system or a more universal health insurance system.

6.4 CHILDREN'S RIGHTS

The intervention aims to:

- Dramatically improve the outcome of premature babies prone to peri-natal infections. This is a particular point of interest for the Shifa neonatology department with high mortality rates.
- Prolong life expectancy and quality of life of children born with cardiac ailments. The intervention will contribute to reduction of child mortality by improving life expectancy for children with cardiac pathologies by bringing in high standard cardiac surgery.

6.5 HIV / AIDS

The intervention is not focussing on any particular aspect of HIV / AIDS.

7. ANNEXES

7.1 LOGICAL FRAMEWORK

General Objective	"To improve the global care in the Palestinian Autonomous Territories by reducing mortality and morbidity due to cardiac and congenital ailments in children and adults"		
Specific Objective	**Indicators**	**Means of Verification**	**Risks and hypothesis**
To upgrade the diagnostic and therapeutic cardiac care facilities in three tertiary care hospitals (one in the Gaza strip, one in Jerusalem and one in the West Bank) To upgrade the treatment capacity in one tertiary health centre in Gaza City	- At the end of the intervention the 3 cardiac centres do completely offer the expected care. - Mortality of Shifa NICU is reduced by 50%.	- National Database - Hospital records - MoH Annual reports - Project reports	- Political changes and interference - Worsening of the siege and closures - Inadequate training and expertise of the staff - Inconsistent maintenance - Lack of disposables - Impaired patient mobility and transfers

Results	Indicators	Means of verification	Risks and hypothesis
R1. A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.	- The cardiac Surgery at EGH is operational - The ICU at EGH is operational - Peri- and post-operative cardiac mortality and morbidity comply with international standards	- National Cardiac Database - EGH Hospital records	- Limited accessibility of the region - Change of hospital administration could reduce support for the creation of cardiac centre - Lack of maintenance - Shortage of building materials
R2. Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended.	- Al-Makkassed PICU is extended - Mortality in PICU is decreased by 10% - Paediatric Cardiac Morbidity	- National Cardiac Database - Makassed hospital records	- Further isolation of the Jerusalem region by the Apartheid wall. - The poorest are not able to access the highly specialized services
R3. A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department.	- Ramallah Cardiac Surgery is established - Mortality - Cardiac Morbidity	- National Cardiac Database - Ramallah hospital records	- Stakeholders not interested in adapting master plan for the hospital complex - Inability to contract the expert specialists - Create incentives for specialized care-takers to ensure continuity
R4. Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.	- Shifa hospital NICU is refurbished and performs according to international standards - Mortality in NICU is decreased by 50% - Premature intake rate	- National Database on neonatology - Shifa Hospital records - Bethlehem University surveys	- Limited accessibility of the region - Utter lack of maintenance - Low level of the care-takers. Training of the personnel is the key factor

7.2 IMPLEMENTATION CALENDAR

The implementation will take a maximum of 5 years.

- During the initial period (first three years), construction and installation of the equipment will be achieved.
- In the mean time, training of the personnel will be started and completed (the longest duration is those of the medical specialists and takes on average 2 additional years after the completion of basic training).
- In a latter phase on-site training will allow the caretakers to acquire sufficient experience with all equipment and infrastructure.
- If necessary they can rely on assistance from international specialists for further specialisation during the whole duration of the project.

7.3 CHRONOGRAM

				2009	2010	2011	2012	2013
A			**Create services in three tertiary health care centers in order to treat children and adults with cardiac ailments in Gaza, Jerusalem and West Bank.**					
A	01		A new Cardiac Intensive Care and Surgery Department in Khann Yunnis is established at the European Gaza Hospital and interventional procedures in the cath-lab are started in order to create a fully functional Cardiac Centre.					
A	01	01	The infrastructure of the the European Gaza Hospital is completed	X	X			
		02	The necessary equipments for interventional procedures in the European Gaza Hospital are installed and functionnal	X	X	X	X	X
		03	A training program is executed		X			
A	02		Therapeutic capacity at the Paediatric Intensive Care Unit in Jerusalem at Makassed hospital is extended					
A	02	01	The infrastructure of the Makassed Hospital Paediatric ICU is extended	X	X			
		02	The necessary equipments for the Makassed Hospital Paediatric ICU are installed and functionnal	X	X	X	X	X
		03	A training program is executed		X			
A	03		A new Cardiac Surgery department in Ramallah is established at the MoH hospital in order to complete the Cardiac Centre by including the existing cath-lab and Cardiology Department					
A	03	01	The infrastructure of the Ramallah Hospital is completed for Cardiac Surgery	X	X			
		02	The necessary equipments for the cardiac department of the Ramallah MoH hospital are installed and functionnal	X	X	X	X	X
		03	A training program is executed		X			
B			**Upgrade the treatment capacity in one tertiary health care centre in Gaza in order to improve clinical outcomes for neonates**					
B	01		Therapeutic procedures at the Neonatology Department in Gaza city at Shifa hospital are reinforced.					
B	01	01	The infrastructure of the neonatology department of the Shifa Hospital is improved	X				
		02	The necessary equipments for Shifa Neonatology are installed and functionnal	X	X	X	X	
		03	A training program is executed		X			

7.4 ToR PERSONNEL

7.4.1 ToR long-term personnel

7.4.1.1 National Project Director

The National Project director, together with the co-director, will be charged with the coordination and the supervision of the project.

He/she will be assigned by the MoH for the whole duration of the project (4 years).
A monthly top up is foreseen of 500 € per month.

Main duties and responsibilities:

- Overall coordination of the program
- Coordination with BTC
- Coordination with the hospital administration
- Coordination with the key stakeholders
- Monthly site visits
- Ensure that semi-annual reports are produced
- Organisation of follow up meetings with the key stakeholders

Profile:

- University graduate in public health and/or hospital management
- At least three years of experience as a coordinator of an development health project
- Experience with the International Cooperation

7.4.1.2 Project co-Director

The Project co-director works closely together with the national director, and is co-responsible for the coordination and the supervision of the project.

He/she will be recruited by BTC and accredited by MoH for the whole duration of the project (4 years). His workload will be approximatively 10 days a month.

A monthly allowance is foreseen of 1000 € per month. (the equivalent of 100 € per day).

Main duties and responsibilities:

- Assist the overall coordination of the program
- Assist coordination with BTC
- Assist coordination with the hospital administration
- Assist coordination with the key stakeholders
- Monthly site visits
- Assist the organisation of monitoring and evaluation
- Assist the organisation of mid-term evaluation
- Ensure that semi-annual reports are produced
- Organisation of follow up meetings with the key stakeholders

Profile:

- Preferably a cardiologist
- Experience in public health or health financing
- Experience in coordination of health project
- Experience with the International Cooperation

7.5 ToR FOR MISSIONS

Short-term international consultancies for audit, provision of technical expertise (tender on equipments, construction and bringing medicotechnical expertise) and project evaluation as foreseen in the project execution modalities.

Medical field

Main duties and responsibilities

- Overall coordination and supervision of the cardiac health program

Profile

- Medical Degree in cardiology, paediatrics or intensive care
- Experience with the International Cooperation

Main duties and responsibilities

- Overall coordination and supervision of the surgical health program

Profile

- Medical Degree in surgery, paediatrics or intensive care
- Experience with the International Cooperation

Main duties and responsibilities

- Overall coordination and supervision of neonatal health program

Profile

- Medical Degree in paediatrics or neonatal care
- Experience with the International Cooperation

Infrastructure and equipments

Main duties and responsibilities

- Conduct tender for recruitment of architects
- Conduct tender for equipments

Profile

- University degree in construction engineering/architecture
- Experience with the International Cooperation

7.6 EQUIPMENT STUDY – IDENTIFIED NEEDS

R1. European Gaza Hospital:

Equipment (BoQ)

Equipment for the new Operation Room			*576.200 Euro*
Item	Qty	Price	Total
Cardio-pulmonary Bypass machine	1	250.000	250.000 Euro
Cell Saver	1	20.000	20.000
IABP	1	30.000	30.000
ACT measuring devices	1	10.000	10.000
Blood-gas analyzer	1	25.000	25.000
Venous saturation measuring device	1	7.200	7.200
Thrombo-elastogram device	1	14.600	14.600
OR table	1	25.000	25.000
Respirator	1	40.000	40.000
Central Monitoring Device	1	20.000	20.000
Overhead OR light	1	25.000	25.000
OR scrub nurse table	1	10.000	10.000
Defibrillator	1	20.000	20.000
Sets of instruments	2	25.000	50.000
Trolleys	2	5.000	10.000
Additional equipment	x		20.000
Equipment for the ICU			*395.000 Euro*
ICU beds	8	10.000	80.000
Ventilators	8	15.000	120.000
Central monitoring	1	10.000	10.000
Monitoring devices	8	10.000	80.000
Blood-gas analyzer	1	25.000	25.000
Defibrillators	2	20.000	40.000
Additional Equipment	x		40.000
Total Costs			**971.200 Euro**

R2. Makassed Hospital Paediatric Cardiac Intensive Centre (PICU):

Equipment (BoQ)

Paediatric Echo Cardio Machine	1	150.000	150.000 Euro
+ trans-thoracic probe	1	20.000	20.000
+ trans-oesophageal probe	1	30.000	30.000
Treadmill	1	16.000	16.000
Additional small Equipment	x		24.000

R3. MoH Ramallah Government Hospital:

Equipment

Equipment for the ICU			*395.000 Euro*
Item	Qty	Price	Total
ICU beds	8	10.000	80.000
Ventilators	8	15.000	120.000
Central monitoring	1	10.000	10.000
Monitoring devices	8	10.000	80.000
Blood-gas analyzer	1	25.000	25.000
Defibrillators	2	20.000	40.000
Additional Equipment	x		40.000
Equipment for the new Operation Room			*576.200 Euro*
Cardio-pulmonary Bypass machine	1	250.000	250.000 Euro
Cell Saver	1	20.000	20.000
IABP	1	30.000	30.000
ACT measuring devices	1	10.000	10.000
Blood-gas analyzer	1	25.000	25.000
Venous saturation measuring device	1	7.200	7.200
Thrombo-elastogram device	1	14.600	14.600
OR table	1	25.000	25.000
Respirator	1	40.000	40.000
Central Monitoring Device	1	20.000	20.000
Overhead OR light	1	25.000	25.000
OR scrub nurse table	1	10.000	10.000
Defibrillator	1	20.000	20.000
Sets of instruments	2	25.000	50.000
Trolleys	2	5.000	10.000
Additional equipment	x		20.000
Total Costs			**971.200 Euro**

R4. Shifa hospital Neonatal Intensive Care Unit (NICU) & Maternity:

Equipment (BoQ)

Equipment for the Neonatal Intensive Care Unit		*181.000*	
Incubators with accessories	5	15.000	75.000
Open air systems with accessories	5	10.000	50.000
Phototherapy lamps	5	2.000	10.000
Nasal CPAP in order to avoid intubations	5	1.500	7.500
Monitoring Devices	5	7.700	38.500
Equipment for the Maternity Unit			*98.000*
Replacement of the delivery beds	5	10.000	50.000
Beds for high risk pregnancies	3	10.000	30.000

Vacuum machines	2	1.500	3.000
Baby scales	2	1.500	3.000
Fetal Heart Monitoring Machines	2	6.000	12.000
Total Costs			**279.000 Euro**

7.7 TRAININGS – OUTLINES

- Outline for training of physicians abroad

Cardiac Surgeon

Prerequisite: Specialist in Surgery.
Total duration: 2 years.
Work exclusively in the Cardiac Surgery Operation Room from 8am daily.
Minimum experience required:

- 150 interventional procedures (1 procedure/day)

Participants will attend daily staff meetings with the cardiologist and cardiac surgeons, to discuss, clinical issues, the results and strategy, every evening Monday until Friday (approx. 6 pm) until the end of the program.

Participants are required to attend:

Every Working day 8 am: General cardiology staff meeting.

and at least, 1 international surgical or interventional cardiology congress.

Cardiac Intensivist

Prerequisite: Specialist in internal medicine, surgery, anaesthesiology or paediatrics.

Duration: 12 months (preferably candidates with experience in emergency medicine).

Work in ICU, 8am until 6pm & night shifts.

General surgical ICU: 3 months

General medical ICU: 3 months

Cardiac surgery ICU: 6 months

Program consists of:

- All intubation and ventilation techniques including paediatrics.
- Invasive Haemodynamics (Arterial, Swann-Ganz catheter, LAP monitoring)
- Pacemaker placement
- Drug treatment and monitoring
- Resuscitation techniques.

Participants are required to attend:

- Staff meeting every 2 weeks with internists and surgeons to discuss, clinical issues, results and strategies.
- Inter-university course in intensive care on yearly basis (could be another university).
- Once a month: General infectiology meeting.
- At least 1 international ICU congress and make 1 presentation.

Cardiac Anaesthesiologist

Prerequisite: Specialist in anaesthesiology.

Duration: 2 years.

Work exclusively in the Cardiac Surgery Operation Room from 8am daily

Program consists of:

- Anaesthesiology techniques
- All intubation and ventilation techniques including paediatrics.
- Invasive Haemodynamics (Arterial, Swann-Ganz catheter, LAP monitoring)
- Haemodynamic measurements and interpretation
- Pacemaker placement
- Drug treatment and monitoring
- Resuscitation techniques.

During his/her training s/he will be able to read and review literature, particularly in anaesthesiology and haemodynamics and become acquainted with the international cardiology and cardiac surgery guidelines.

The minimum clinical experience is required to be 150 cases per year as the assistant and 50 cases per year, as the principal operator with senior supervision.

- OUTLINE OF ICU NURSE TRAINING PROGRAM

The aim is to upgrade and maintain the knowledge and skills of the nursing staff within Intensive Care.

Objectives

Following the program the nurse will:

1. Be able to apply theory to practice
2. Be able to care for critically ill patients in a systematic manner
3. Be able to assess problems experienced by critically ill patients and develop an action plan to overcome them
4. Have a deeper knowledge to issues related to critically ill patients
5. Be able to contribute towards developing effective patient care
6. Understand the role of self and others within the care of critically ill patients

The target audience is all nursing staff who care for patients within an intensive care environment including; ICU, OR, Intermediate Care and nursing staff new to these areas or those who wish to upgrade their current skills.

Program

The following program is to be conducted via in-service training at the existing ICU in Ramallah (including a formal end of program assessment for each participant) provided by nurse trainers over a 3-month period. It is recommended that the trainers come from the same institution and/or department to maintain coherence, as well as one set of practice standards. The training is proposed to begin 3 months prior to start date and continue 3 month after start locally. This will provide ongoing in-service training as the facility becomes operational and enable fine-tuning of all systems and procedures. The trainers are to work on a full time capacity during the entire duration. Such a set up will also present the added value of improving current Ramallah ICU operations. Certification will be awarded upon completion and achievement of the set assessment criteria. Assessment will be continuous through a process of direct clinical supervision and achievement of 3 work-based assignments, for example, case study with presentation, implementation of clinical research & produce a professional development plan. All sections will include the relevant background and specific knowledge base i.e. anatomy and physiology.

Environment

- The intensive care environment
- Monitoring in intensive care areas
- Admission & discharge of the critically ill patient
- Transporting the critically ill patient

Communication

- Communicating with critically ill patients
- Verbal & non verbal
- Dealing with confused patients
- Reality orientation
- The patient as part of a family – dealing with relatives
- Use of computers in intensive care

Respiratory care

- Respiratory failure
- Care of patients with endo-tracheal & tracheotomy tubes
- Ventilatory support
- CPAP
- Blood gas analysis
- Suctioning patients
- Physiotherapy in intensive care

Cardiac care

- Cardiac failure
- Haemodynamic monitoring of patients
- Emergency resuscitation
- Shock

Homeostasis

- Fluid balance – intake
- IV therapy & management
- Intravenous feeding of patients
- Enteral feeding
- Gastrointestinal problems experienced by critically ill patients
- Fluid balance – output
- Urinary drainage
- Renal failure
- Care of patients requiring dialysis
- Bowel care
- Interpretation of laboratory studies

Patient Care

- The bed bath
- The essentials of mouth & eye care
- Tissue viability – including pressure area care
- Mobilizing
- Positioning of critically ill patients
- Lifting & handling
- Preventing thrombosis

Consciousness

- Neurological problems
- Neurological observations
- Drugs in intensive care
- Pain management
- Sedation

Mortality

- Brain death
- Care of the dying patient
- Understanding differing cultural & religious beliefs
- Medical ethics

- Outline of Operation Room Nurse Training

Aim

To upgrade and maintain the knowledge and skills of the nursing staff within the operation room

Objectives

Following the program the nurse will:

- Be able to apply theory to practice
- Be able to care for patients undergoing OR procedures in a systematic manner
- Be able to assess problems experienced by OR lab patients and develop an action plan to overcome them
- Have a deeper knowledge to issues related to patients undergoing OR procedures
- Be able to operate and care for, the specialized equipment
- Be able to contribute towards developing effective patient care

The target audience is all nursing staff that cares for patients within an operation room and nursing staff new to these areas or those who wish to upgrade their current skills. The training will be done on-site with the help of external trainers, preferentially during foreign surgical mission already organized by PCRF.

Program

Environment

- The operation room environment
- Monitoring in the OR
- Admission & discharge of patients
- Transporting the critically ill patient
- Medical & surgical asepsis
- Operation and care of specialized equipment

Communication

- Patient preparation for procedure
- Psychological care, before, during & after the procedure
- The patient as part of a family – dealing with relatives
- Use of computers

Cardiac & Respiratory care

- Interventional procedures
- Patient assessment
- Cardiac failure
- Haemodynamic monitoring of patients
- Emergency resuscitation
- Shock

Hemostasis

- Fluid balance – intake
- IV therapy & management

- Fluid balance – output
- Urinary drainage
- Interpretation of laboratory studies

Patient Care
- Patient preparation for procedure
- Tissue viability – including pressure area care
- Positioning of patients during procedures
- Lifting & handling
- Preventing thrombosis

Consciousness
- Neurological assessment
- Drugs & medication management
- Pain management
- Sedation

- OUTLINE OF NEONATAL NURSE TRAINING

Description of the Graduate Diploma Program in special and intensive care Neonatal Nursing

The neonatal Nursing Program, which is approved by the Ministry of Education and Higher Education, is a two-year-academic course of studies which involves significant hours of clinical training in addition to classroom instruction. Bethlehem University is the only university in Palestine accredited to offer a Neonatal Higher Diploma.

The 45 persons who have graduated from previous cohorts of the Neonatal Program at Bethlehem University are serving in different hospitals in Bethlehem, Jerusalem and Hebron. Other hospitals have indicated the need for another cohort of students needing special training in Neonatal care.

The need for qualified neonatal professionals to enter the profession is great and the Nursing Faculty of Bethlehem University in cooperation with BTC/CTB and local partner hospitals seeks to improve the well being of newborn infants and to reduce the morbidity and mortality rates in Palestine.

Neonatal Nursing is a relatively new specialty in comparison with adult health, midwifery, or other areas of nursing. The graduate diploma aims to provide staff nurses who work in neonatal departments or in other clinical departments with advanced level of knowledge and skills needed to produce competent, independent professional neonatal nurses to provide comprehensive nursing care. In addition, this program prepares professional nurses to work in a multi disciplinary approach to meet the health needs and improve the health status of special and critically ill newborns and their families.

Criteria for Admission

- Tawjihi 65% and above.
- Bachelor Degree in Nursing.
- Minimum of two years nursing experience preferably in Pediatrics or Neonatal departments.
- Satisfactory knowledge of English.
- Passing an interview.

Special Criteria

- Failure to obtain a C in any of the major courses means repeating the course.
- Students should pass a comprehensive exam at the end of the program.

- OUTLINE FOR PHYSICIAN TRAINING IN NEONATOLOGY

Neonatologist

Holy Family Hospital (HFH) in Bethlehem could take a pediatrician for one/two year training in neonatology. HFH is recognized by the Palestinian Medical Board for one year training in neonatology.

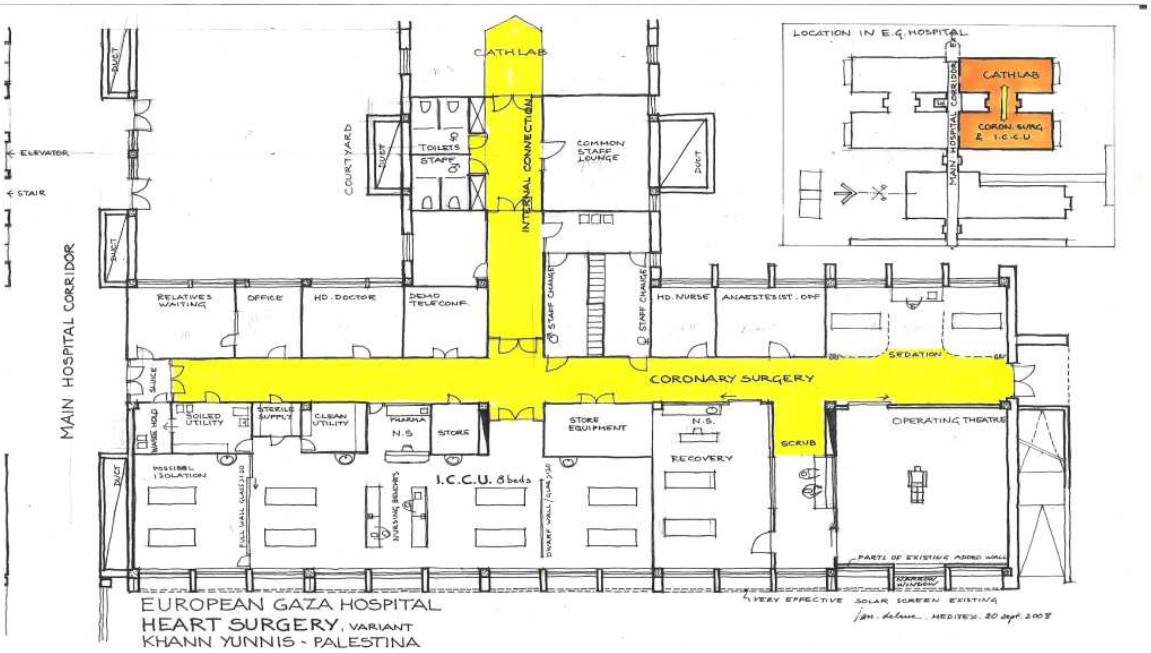
Prerequisite: Specialist in pediatrics.

Duration: 1-2 years.

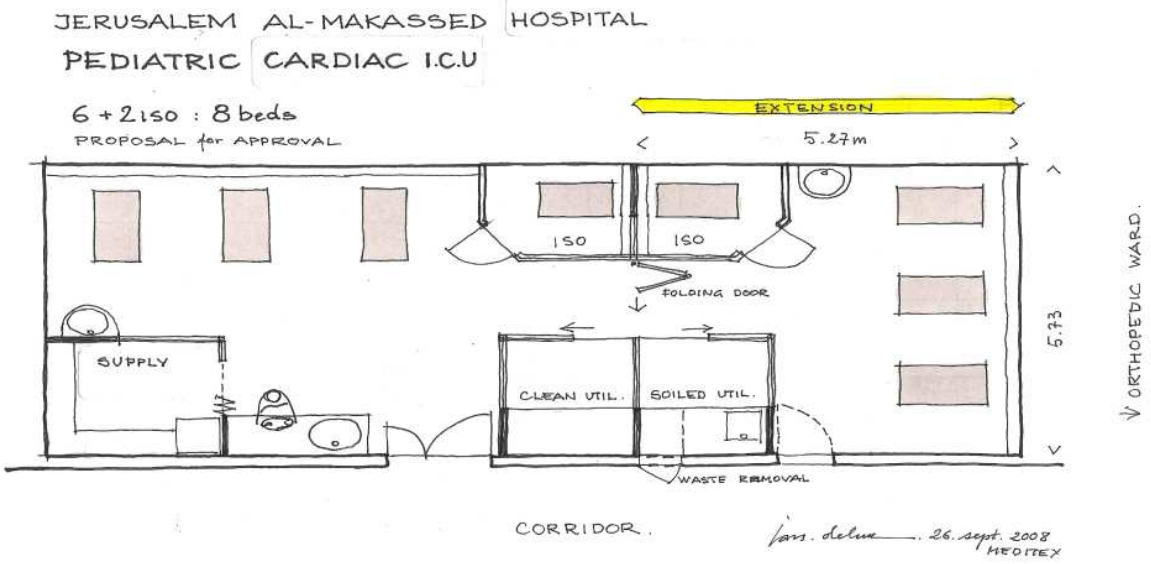
Work exclusively in the Neonatology department from 8am daily

7.8 INFRASTRUCTURE WORKS

7.8.1 Conceptual plans EGH



7.8.2 Conceptual plans Makassed



7.8.3 Conceptual plans Ramallah