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HEALTH CONDITIONS AND SERVICES IN THE WEST BANK AND GAZA STRIP

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* This study constitutes Part One of the contribution made by Dr. Rita Giacaman (Birzeit University, West Bank) to the intersectoral project of the UNCTAD secretariat on "Prospects for sustained development of the Palestinian economy in the West Bank and Gaza Strip". The opinions expressed in this study are the author's and do not necessarily reflect those of the Secretariat of the United Nations. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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Preface

(i) As part of its work programme pursuant to resolution 239 (XXIII) of the Trade and Development Board and resolution 44/174 of the General Assembly, the UNCTAD secretariat initiated, in 1990/91, the preparation of an in-depth intersectoral project on the economy of the West Bank and Gaza Strip. Part one of the project deals with a comprehensive assessment of the economic and social situation in the West Bank and Gaza Strip, the main impediments to sustained growth and development, pressing needs and corresponding measures for immediate action to promote recovery. Part two of the project constitutes an in-depth analysis of prospects under different scenarios for the future development of the Palestinian economy. Part three of the project is intended to provide both a strategy framework and policy guidelines for the revival and sustained future development of the Palestinian economy in the West Bank and Gaza Strip.

(ii) For the implementation of the project, a total of 25 in-depth studies were initiated at the field level covering economic and social sectors and issues. Concurrently, and in order to facilitate the technical aspects of work on parts two and three, the UNCTAD secretariat has also prepared an in-depth study of a quantitative framework examining future options and prospects under several scenarios. The summary findings of the field studies, in particular an identification of pressing needs and corresponding feasible measures for immediate action, were presented for further consideration by an expert group meeting (held in May 1992). The report of that meeting is published separately (UNCTAD/DSD/SEU/2). It will be followed by the secretariat's study of a quantitative framework for analysing future prospects (UNCTAD/DSD/SEU/3).

(iii) In order to provide more detailed substantive background to the findings and recommendations of the expert group meeting, and to enable donors further to develop their programmes of assistance to the Palestinian people, the first parts of a selected number of the field studies commissioned within the scope of this project are being published in a special study series on Palestinian economic and social development. The second and third parts of the field studies are being consolidated by the UNCTAD secretariat and will subsequently be issued.

(iv) The present study (prepared by an UNCTAD consultant, Dr. Rita H. Giacaman, Birzeit University, West Bank) constitutes a background document reviewing public health conditions and services in the occupied Palestinian territory (West Bank and Gaza Strip). In developing the scope and orientation of the subject, the outline of the study was brought to the attention of the World Health Organization (WHO) and the United Nations Relief and Work Agency for Palestinian Refugees in the Middle East (UNRWA) with the aim of soliciting their views and coordinating efforts. The valuable observations and suggestions received along with relevant reports and studies dealing with health conditions in the occupied Palestinian territory contributed towards the preparation of this study. Chapter I examines health conditions in the territory up to 1987, and the main types of diseases and public health problems that exist. Chapter II provides an in-depth analysis of current health services structures, covering primary care, secondary care, tertiary care, rehabilitation and geriatric services. Chapter III examines the human resources aspect of health care, including physicians, nurses,

pharmacists, dentists, medical technicians, village health workers and indigenous medical practitioners. Chapter IV traces the ongoing debate on the relative merits of curative and preventive care systems. Chapter V identifies the range of factors affecting the health conditions of the Palestinian people. These include Israeli policies and practices, cultural factors, the impact of the uprising and subsequent regional developments, international assistance to the Palestinian health sector as well as medication and the local pharmaceutical industry. Chapter VI reflects on the prerequisites for the effective management of the Palestinian health system; chapter VII draws conclusions and presents an integrated set of recommendations for immediate action to improve and develop Palestinian health-care services.

(v) It should be noted that, in view of the early completion of the in-depth sectoral studies undertaken within the context of the intersectoral project, the implications of the accords concluded between Israel and Palestine in 1993 and 1994 could not be reflected in this study.

Introduction

This study aims at contributing to policy formulation and planning for health services in the occupied Palestinian territory. Its primary purpose is to elaborate, through a systematic examination of the health situation and services and their development over the years, the conditions and determinants of the health status of the Palestinian population. It examines as well the general conditions of health services and their ability to fulfil the population's basic health needs. An attempt is made also to outline the future role of the public health sector within the perspective of Palestinian economic and social development, based on the picture drawn in the first part. Lastly, it seeks to lay the foundation for realizable strategies and policy options for both short and longer-term health needs in the territory, and recommends appropriate activities for short and long-term implementation. This study also raises key questions pertaining to the debate on health and health services in the occupied territory over the past 10 years. Towards this end, it discusses not only the effects of military rule on health and health services, but also the issues and problems endemic to Palestinian society itself.

Any analysis of health conditions and services under military rule must take into account certain vital considerations. First, while health conditions and health services are interrelated, they are nevertheless distinct phenomena that do not always follow the same trend. Although health services can have an important effect on a population's health, they are not the only determinants of health status. Indeed, studies of health conditions of selected categories of population in the occupied territory have revealed that health conditions and services in the 1970s were producing different trends in certain instances: serious general deterioration in services, but improvement in health conditions in specific localities. Of course, such improvements took place despite the policies and practices of the military occupation, and because of the great emphasis Palestinians placed on self-reliant health care. Moreover, a trend towards improved health conditions had already begun and continued throughout the 1980s. Nevertheless, Palestinian health professionals and researchers continued to conflate health conditions with health services: often, the two were seen as one and the same phenomenon. Consequently, by assuming that health conditions and health services followed an identical trend, researchers would sometimes draw erroneous conclusions about the health conditions of the population. 1/

Secondly, realistic and practical plans for the further development of the public health sector in the occupied territory must reflect all factors determining the conditions of health. That is, while military rule is certainly a major determinant of health conditions and the principal cause of the deterioration in health services in the area, it is not the only one. Other determinants are generated internally, a result of the dynamics within Palestinian society itself. A case in point is that of gender differentials in health status, which will be discussed in detail later. This difference in health status between the sexes is rooted in the way in which Palestinian

society is organized, rather than being an outcome of the presence of military rule. This disparity must be given due consideration in view of its importance for health and for health planning in the long term.

Thirdly, considerable flexibility and vision is needed when analysing health conditions and services within the context of Israeli military rule. Health conditions are a manifestation of socio-economic and historical phenomena, and are not solely biologically determined. This is precisely why health conditions usually evolve within a larger context of change.

The author wishes to acknowledge the valuable assistance of Dr. Mustafa Barghouti in preparations for this study.

Chapter I

HEALTH CONDITIONS UP TO 1987

A. A brief overview of the health situation in the territory

The study of health cannot be divorced from a study of the area's contemporary socio-economic and political history. Throughout its modern history, Palestinian society has been ruled by several different regimes: the Ottoman Empire, the British Mandate, the Jordanian and Egyptian administration, and most recently the Israeli military occupation. In the second half of the nineteenth century, the processes of economic and social change included, among other things, the expansion of the cultivated area, the development of exports, and the growth of population. 2/ However, the natural increase in population appears to have been modest until the end of the Turkish rule, suggesting that mortality rates were high for both children and adults and fertility changed very little before the 1960s. 3/ The advent of British Mandate brought further changes, notably a substantial improvement in the standard of living. Although public expenditures on social welfare services were low, 4/ a sharp decline in morbidity and mortality rates was observed throughout the period of the British Mandate, 5/ reflecting, inter alia, the impact of relatively strong economic development in the Mandatory period, coupled with greater attention being given at the time to health care as compared to the pre-First World War situation.

1. The advent of modern scientific medicine in the territory

As is the case in other third world settings, 6/ Western modern and scientific medicine took root, institutionally, in Palestine with its incorporation into the British economic system in the early twentieth century. 7/ During this period, the indigenous medical system 8/ was subjected to a variety of modifications which resulted from changing economic and social relations. With the increasing use of money, markets and exchange, the response of the population to health and disease began to change; health and medical care underwent a gradual process of "commercialization". This process was not peculiar to Palestine. In northern Yemen, 9/ for example, the social and economic transformations which had occurred over the past 50 years produced changing attitudes towards health care. An important shift took place away from the health-promoting behaviour that formed one of the foundations of the traditional medical/belief system, to one based largely on the purchase of a cure. The principles underlying the practices in each of the earlier and later systems were, and remain, different.

The indigenous (or traditional) system is characterized by an integrated view of sickness and a holistic orientation. Illnesses are viewed as affecting the physical, psychological, and social well-being of individuals. The cause of disease is also seen as being multiple, rarely due to just one precipitating factor. The physical and mental situations are seen as inseparable. Therefore, health promoting behaviour, good nutrition, the avoidance of air currents, and an understanding of the way in which "hot" and "cold" foods relate to good health are deemed important components of health and disease management. The impact of these also depends on the idea of

addressing the ill individual's psychological and physical maladaptation through various means, including the resolution of social conflicts. Healers are usually sought when self and family help fails. 10/

Modern medicine, by contrast, is characterized by a biomedical orientation that conceives of health as a biological phenomenon. This orientation is dualistic in that it separates the physical from the mental or psychological, and deals with the parts of the body as they function separately albeit with important interactions. Disease is seen as a mechanical malfunction of systems and organs, subject to correction through technical intervention. The processes of medical care and healing are also defined in the same mechanical and technical terms, and translated into treatments that are purchased, and that occur in a clinic or hospital and rely upon equipment and medication. 11/

Certainly, the Palestinian population benefited from Western scientific medicine and the technology that accompanied it. Clearly, technologies such as immunization, for instance, contributed to the sharp decline in morbidity and mortality rates during the period of Mandate, along with the effects of an improved standard of living. Nor should one assume that the traditional system was completely submerged and replaced by the modern one; the former still persists, but in a modified form that appears to have adapted new realities to old concepts. Western scientific medicine has gradually assumed a dominant position; yet, folk illnesses persist, and traditional cures continue to be sought, especially by the rural population.

2. The post-1948 developments

Following 1948, the West Bank became part of the Hashemite Kingdom of Jordan while the Gaza Strip went under Egyptian military administration. Although the dearth of information regarding health levels and health services up to 1967 makes it impossible to produce reliable time-trend delineations, the initial evidence suggests that infant and child mortality in the region continued to fall during the 1950s and 1960s. 12/ However, according to the Jordanian census of 1961 and the Israeli census of 1967, the mortality of children up to five years in the West Bank was still 25 per cent in the late 1950s, and almost 21 per cent in the mid-1960s. It appears that regional variations were substantial, owing largely to the impact of economic changes on living conditions and income, as opposed to the presence or absence of health services. Yet, the overall infant mortality rate remained high, especially in the rural areas. 13/

While the sparsity of data pertaining to the nutritional status of the West Bank and Gaza Strip populations in the 1950s and 1960s precludes the possibility of making exact assessments, available information suggests that malnutrition among children continued to be a serious public health problem even during the 1960s. A 1962 study of the nutritional status of a sample of 2,843 children under the age of five years in Jordan (including selected West Bank localities) revealed serious nutritional problems, in some children, including weight and height deficiencies, low vitamin A and carotene levels, low riboflavin excretion, anaemia, and the presence of clinical cases of marasmus, pre-kwashiorkor and kwashiorkor. Feeding patterns, and maternal education were identified as important contributory factors. 14/ The study did not refer to the relationship between inadequate environmental and

socio-economic conditions and malnutrition, although malnutrition was associated with infections and diarrhoeal diseases. Overall, available data indicates an unsatisfactory general health situation in the areas with high levels of infant mortality attributed to inadequate sanitary conditions, unsafe environments 15/ and poor nutrition.

Modern medical services became accessible to refugees and to rural areas only as of the late 1950s, when the Jordanian and Egyptian service infrastructures, notably in health and education, reached the countryside in the West Bank and Gaza Strip, respectively. But as in Jordan and Egypt, these services were rudimentary, restricted largely to the biomedical and curative variety. 16/ However, the population continued to rely on the traditional medical system as well. Therefore, by 1967 most Palestinian communities in the West Bank and Gaza Strip exhibited poor health status, characterized by relatively high infant mortality rates and malnutrition among children. 17/ The population lacked many basic medical services with uneven access to services between regions. While the Jordanian and Egyptian Governments did take steps to build a network of clinics in the areas, those which did exist could only provide limited services unable to reach many of those in need, necessitating the continued use of traditional healers and practitioners.

B. Health conditions during the period 1967-1987

In 1967, approximately 1.3 million Palestinians living in the West Bank and Gaza Strip came under Israeli military rule. Since then, the conditions of occupation began to impose deeply rooted changes on every aspect of life in the occupied Palestinian territory, including health status and health services.

During the first two decades of Israeli rule, the policy and regulatory environment in the occupied territory was transformed, with significant effects on the health status of the population. The first 10 years of military rule carried with them a slowly rising consciousness among Palestinians of these changes and what they implied. The medical and allied health establishment that had been part of the Jordanian and Egyptian medical care systems found themselves outside the system of Israeli military rule which became the new purveyor of medical care. Palestinians no longer had any input into policy formulation or planning, which became the domain of the occupation authorities. Medical professionals and researchers began to write about the inadequate health conditions under which people lived by the mid-1970s. 18/ Simultaneously, the Israeli military government produced statistics that were at variance with the findings of Palestinian researchers. The long-standing debate over infant mortality in the West Bank and Gaza Strip is a case in point.

Throughout the 1970s and the first part of the 1980s, health statistics on the West Bank and Gaza Strip produced by the Israeli military government indicated a general improvement in health conditions, as measured by infant mortality rates for the West Bank (Table 1). Palestinian researchers, however, argued that these figures represented a substantial underestimation of reality, given the inadequate system of reporting deaths and disease incidence that prevailed at the time. They further maintained that health conditions were seriously underdeveloped given infant mortality rates of 50 to 100 deaths per 1,000 live births for the West Bank and Gaza Strip through the

mid-1980s. 19/ Simultaneously, studies conducted by Israeli researchers working at the Israeli Central Bureau of Statistics revealed findings that confirmed those obtained by Palestinians. 20/ Yet, Palestinian researchers also failed to see that despite a declining health situation, there were clear instances of improvement in health conditions. These improvements were due in part to the sustained efforts of the Palestinians themselves. 21/

Since 1967, Palestinian society in the West Bank and Gaza Strip has experienced significant social transformations concomitant with changes in the general political and economic context. Of importance in terms of its impact on health status has been changing patterns of employment, from agricultural work and some wage work before 1968 to wage work in Israel and the West Bank as well as abroad, mostly in the Arab countries. Since 1967, individual and family incomes rose, but at the cost of systemic impoverishment. A move away from agriculture, coupled with improved incomes, meant a rise in the standard of living and a move towards "commercialization" in general. At the same time, educational levels also rose. 22/

As a result of these deeply rooted changes, the spread of disease as well as health and sickness behaviour also began to change. Today, the health situation is dual in nature, combining aspects of old and new: diseases of the developing world, such as diarrhoea, respiratory disease, malnutrition, parasitic infections and a variety of other communicable and infectious diseases, combined with diseases of the modern world, such as hypertension, diabetes, heart disease, and cancer.

1. Diseases associated with underdevelopment

The West Bank and Gaza Strip continue to suffer from the frequent occurrence of infectious and communicable diseases as well as malnutrition. Although aggregate figures are not available, the assimilation of various types of morbidity studies reveals important patterns. For example, for the latter part of the 1980s, the most common conditions reported by government clinics in the West Bank were: (a) diseases of the upper respiratory tract (21 per cent of total visits); (b) other diseases of the respiratory system (11 per cent of total visits); (c) diseases of the skin (11 per cent of total visits); (d) diseases of the musculoskeletal system (10 per cent of total visits); and (e) diseases of the digestive system (9 per cent of total visits). 23/ For 1988, there were 718 reported cases of brucellosis 24/ among non-refugees, in addition to an estimated 1,200 unreported cases. UNRWA reported another 202 cases for 1988 as well. 25/ There were at least 1,000 reported cases of mumps, 700 of chicken pox, and 500 cases of hepatitis. 26/ Other reports 27/ based on information from 32 clinics, including those in the Gaza Strip, reveal a disease distribution in which 60 per cent of the cases presented at these clinics were paediatric. Of these, diarrhoeal diseases claimed 15-20 per cent of total cases, reaching up to 50 per cent in certain parts of the Gaza Strip. Malnutrition claimed an additional 10-20 per cent and respiratory infections 30-40 per cent. As expected, these figures fluctuate depending on the season, with diarrhoeal diseases peaking during the summer months, and respiratory diseases during the winter.

Thus, morbidity, especially in childhood, was a serious public health problem throughout the occupation period. While it was impossible to conduct

national surveys, 28/ sample studies conducted by a variety of researchers revealed a high malnutrition rate among children, ranging between 20-50 per cent of children between the ages of 0-3, depending on locality and region. In a nutritional survey of selected refugee populations, a 20.4 per cent rate of stunting was found in the Gaza Strip and 15.1 per cent in the West Bank, evidence of previous malnutrition. Half of the children studied were also found to be anaemic. The same rate of anaemia existed for pregnant and lactating women as well. 29/ A study of a Jordan Valley community found that 52 per cent of children under the age of five years were suffering from malnourishment. 30/ In another study conducted in three localities in the Ramallah District, 41 per cent of the children under the age of three years were malnourished. 31/

These studies also showed a high rate of infestation with parasites as well as infectious diseases, notably diarrhoea in the summer and respiratory infections in the winter. 32/ In 1984-1985 another report analysing 6,781 cases diagnosed in a clinic in the Ramallah District in a period of one year revealed a 35 per cent rate of respiratory disease, a 12 per cent rate of gastrointestinal disease, a 10 per cent rate of musculoskeletal disease, a 9 per cent rate of urinary infections, and an 8 per cent rate of dermatological problems. 33/ A study of three communities in the Ramallah District revealed a malnutrition rate of 41 per cent among children under the age of three years in 1981. The same study also revealed a 32 per cent rate of parasitic infestation among these children, mostly giardia lamblia, entamoeba hystolitica, and ascaris lumbercoides. Of all the children under the age of three years in these communities, 32 per cent were reported as having had diarrhoea at least once within the two weeks preceding the survey. 34/

A study conducted in the Jordan Valley region in 1981 revealed almost a 50 per cent rate of malnutrition among children under the age of five years. 35/ A study of another Jordan Valley community showed a 43 per cent rate of parasitosis among children under the age of three years, and a 44 per cent rate of malnutrition in 1988. Of the total number of mothers whose children were under the age of three years, 64 per cent exhibited symptoms of anaemia. Other studies conducted in the latter part of the 1980s 36/ consistently describe the same picture: respiratory disease is most prevalent during the winter, and diarrhoeal disease during the summer; high levels of malnutrition among children, especially the very young; and anaemia among young children and women of child-bearing age, especially pregnant and lactating women. These studies also reveal the poor environmental and sanitary conditions in the area: the lack of adequate sources of drinking water; the unavailability of water for cleaning; the absence of refuse disposal services; the absence of proper sewage disposal systems; the low level of personal hygiene and sanitation; and the lack of health education programmes to address these problems. The picture is very much part of underdevelopment, with infectious and communicable diseases and malnutrition being major public health hazards, and a polluted environment an important causative agent of these diseases along with inadequate maternal education. Furthermore, some of these studies also point to health behaviour as another important causative agent of disease. The best example that can be provided is the higher infant mortality and malnutrition rates among girls than boys in many of the communities studied, owing to the selective neglect

of female children that often takes place in Palestinian communities. 37/ This social problem, too, must be addressed when planning for the future delivery of health-care services in the territory.

2. Diseases associated with modern lifestyles

In line with transitional societies elsewhere in the third world, the West Bank and Gaza Strip appear to be suffering from what may be called the diseases of the modern world such as, heart diseases, hypertension, malignant neoplasms, renal failure and diabetes. While data on these diseases have not been systematically compiled, it is still possible to draw some tentative remarks from the limited information that is available. 38/ The Israeli authorities cited consecutively heart diseases, malignant neoplasms, respiratory diseases, perinatal conditions, and diseases of the digestive system as the five leading causes of morbidity in 1988. 39/ Official reports for 1990-1991 are almost identical.

While community studies cannot be generalized as applying to the entire population, in the absence of concrete data for the country as a whole they can assist in providing an elementary picture of disease distribution. A community study conducted in a Jerusalem District village revealed a 15 per cent reported rate of diabetes, heart disease and hypertension among the inhabitants. 40/ Indeed, clinical experience does point to the dramatic rise in the rate of these diseases among the population of both the West Bank and Gaza Strip. It must be added that death owing to injury caused by Israeli military violence was found to be the second leading cause of death in 1988. With 17,000 injuries in 1989 this became the main health problem in that year, even more prevalent than influenza.

In all, available data indicates that health conditions of the population living in the West Bank and Gaza Strip remained unacceptably poor throughout the years of military rule and continues to be characterized by its duality: combining diseases of underdevelopment with those associated with modern lifestyles, and reflecting the transitional state in which Palestinian society finds itself.

Chapter II

HEALTH SERVICES DURING THE PERIOD 1967-1987

A. Health services until the 1980s

In the wake of occupation, three systems for health service provision were operating in the area: the governmental system, supervised and controlled by the Governments of Jordan and Egypt for the West Bank and Gaza Strip, respectively; the United Nations Relief and Works Agency (UNRWA), specializing in the provision of medical services to refugees; and the private sector, including health services provided by charitable institutions. It was the governmental health sector, where the majority of people sought and received health care, that was most negatively affected by military rule.

Following the 1967 war and the imposition of Israeli rule, the military authorities assumed complete control of existing governmental health facilities previously administered by Jordan and Egypt. The authorities subsequently embarked on a policy that, at best, had neglected to maintain the existing health infrastructure and, at worst, had suppressed the natural growth and development of existing health services.

As far as governmental health services are concerned, 20 years of military rule produced a weakening of services. Official allocations for health services in the occupied territory come from funds derived from revenues received from national health insurance premiums paid by the population, from fees received for services provided in government hospitals, and from the taxes paid by the population. No general governmental budgetary support for the recurrent costs of social services provided to the population existed for the occupied territory. That is, the system is a closed one, financially speaking, in that expenditures do not exceed revenues. The governmental allocation for health services in the territory is the second lowest of 36 low-income and lower middle-income countries (as defined by the World Bank) and far below that of Israel. 41/ For instance, it was found that the West Bank health services budget for 1975 was equivalent to about 60 per cent of the budget of one 260-bed Israeli hospital for the same year. 42/ In 1986, it was noted that the average Israeli military government expenditure on health services in the West Bank and Gaza Strip did not exceed US$ 30 per person per year, compared to US$ 350 per capita in Israel. 43/ In 1985, the budget for government hospitals in the West Bank was US$ 8 million, of which three million were spent on the treatment of Palestinian Arab transfer patients in Israeli hospitals. 44/ In the same year, the budget of one Israeli hospital (Akhilof) was six times the amount allocated to all nine government hospitals in the West Bank. 45/ In 1986, the West Bank health budget was raised to about US$ 20 million, and remained close to this figure in 1987, 1988 and 1989, 46/ despite Israeli shekel devaluations, rising costs of living, population increases averaging 3 per cent per year, and rising demand for health services.

Official Israeli statistics revealed that the hospital bed/population ratio continued to be inadequate, standing at 1.6 to 1.8 per 1,000 for the West Bank and 1.2 per 1,000 for the Gaza Strip in the latter parts of 1980, in contrast to 6.1 per 1,000 ratio in Israel in 1987. During this period, hospitals and other health facilities were also closed down (such as the blood

bank and the Beitin Hospital in the Ramallah area) or deprived of critical personnel. For example, the physician-to-population ratio reached the low level of 8 per 10,000 in the West Bank and Gaza Strip in 1986, compared with 28 per 10,000 in Israel and 22 per 10,000 in Jordan. By the mid-1980s, it was becoming apparent that the governmental health system suffered from serious inequalities in the distribution of health services, neglecting primary health care and general health in the rural areas. Moreover, health budgets were continuously slashed, and in 1988-1989 the situation deteriorated sharply when allocations for health services in the occupied territory were reduced by 45-60 per cent. 47/

Simultaneously, the actions of the authorities, e.g., inadequate budgeting, referral to Israeli hospitals for tertiary care, and restrictions on licences for new health and medical care projects, led to the marginalization of the existing government health infrastructure in the occupied territory, forcing it to depend on Israeli services almost entirely.

Many Palestinians consequently found the private health sector to be the most appropriate domain within which to mount a response to the deteriorating conditions of health services under military rule. The breakdown of the infrastructure and the consequent dependence on Israeli services in all aspects of life distinguished Israeli military rule, and in this sense the deterioration of the health services system was no exception. 48/ The exception was UNRWA, which was able to provide and develop further basic and needed services for the refugee population throughout the period under study.

The private Palestinian medical and health establishment including private voluntary, charitable and profit-oriented organizations responded to this situation by attempting to develop health services independent of the government system, but within the boundaries of military law and regulations. It was through these efforts that the backbone for the curative and centralized segment of the Palestinian health infrastructure was formed in the 1970s. The Palestine Liberation Organization, Jordanian and some Arab sources supported this system through the provision of "steadfastness" funds for the rendering of health services. Nevertheless, this sector's activities were curtailed by official regulations and restrictions on the acquisition of permits to establish and develop further health services. This is one of the reasons why the Palestinians took the initiative to fill the gap through the creation of popular health committees. Notwithstanding its relatively small scale, this initiative constituted a movement that attempted to fulfil people's basic health needs despite the constraints imposed by Israeli military rule on the development of the Palestinian private health sector.

B. Current health services structures (1991)

As was the case in the early years of occupation, the health services that are currently being rendered to the population of the West Bank and Gaza Strip are provided by three distinct and almost completely independent sectors: (a) the Government, controlled by the Israeli authorities; (b) UNRWA services, provided to some 200,000 refugees in the West Bank, and more than half a million in the Gaza Strip; and, (c) the private Palestinian sector. The last is in fact an umbrella for both the genuine private medical services (i.e., pure private practice) and Palestinian non-governmental organizations operating in lieu of governmental services. Palestinian non-governmental

organizations, in turn, are divided into three prototypes which are informed by the kind of, and the approach to, service provision that they advocate:

(a) **Charitable societies operating major hospitals and diagnostic centres**. These have been in existence for many years and represent the classical approach to health-care delivery characterized by a concentration on secondary services in urban areas, a focus on curative medicine, the improvement of technical skills, and an emphasis on laboratory and diagnostic medicine and specialization;

(b) **Charitable societies operating primary health-care centres**. Some of these have been in existence for some time, such as Birzeit Women's Charitable Society and the International Christian Committee primary care centres which have existed since 1961. Others were founded more recently and represent the approach to service provision that is linked to the will of Palestinians to resist occupation and help people stay on the land by providing basic services to them. While the main thrust of these institutions is on primary care, the emphasis continues to be curative medicine, drugs, injections and x-rays. To these institutions, primary care is mainly about the provision of curative, decentralized services in rural and urban areas of the territory; and,

(c) **The "popular health movement"** made up of Palestinian non-governmental organizations providing mostly primary care services and focusing on rural and disadvantaged areas and preventive medicine. These groups rely primarily on the volunteer services of their members, and in this way mobilize a segment of the medical and health professionals in the country within the context of the national struggle. Their approach to health care is one that focuses on health promotion and prevention, and emphasizes a concept of health services that are socially constructed. That is to say that preventive and health promoting actions take into consideration the larger socio-economic and cultural context within which the patient lives. Thus, at least in principle, these groups have enlarged the concept of medical and health-care provision to include preventive measures such as health education, especially of mothers, baby clinics, nutritional assessment, and relating health conditions to the wider socio-economic setting.

1. Primary care services 49/

Primary health-care provision is generally understood to comprise the following main preventive activities: vaccination, health education, environmental sanitation, nutritional and housing conditions assessments, school health, mother and child health (MCH), mental health and community based rehabilitation. To these specializations should be added the limited health-care delivery usually practised at the primary level (i.e., diagnosis and treatment of common diseases, first aid for injuries, day surgeries and dental care) in addition to the important function of referral to secondary health treatment. In the occupied territory, different sectors provide some of these services, in an ad-hoc and uncoordinated manner. Primary care services in the West Bank and Gaza Strip comprise activities of curative clinics, maternal and child health centres, rudimentary elements of a dental services programme, and diagnostic aids, such as laboratories and x-ray facilities. As stated earlier, those are provided in differing degrees by the governmental sector, the private Palestinian sector, and UNRWA. Vaccination

programmes are conducted almost exclusively in governmental and UNRWA facilities since private Palestinian health institutions do not have access to vaccines.

Tables 2 and 3 provide a breakdown of the number of health centres currently being operated in the West Bank by district and sector. Jerusalem is excluded and is dealt with separately, because the services to which people have access are provided by Palestinian non-governmental organizations, and the Israeli Ministry of Health. The range of services available in Jerusalem is much wider than that found in the West Bank or Gaza Strip. The figures in table 3 for the West Bank pertain to health centres that are operated either by public authorities or the private Palestinian sector (excluding the large number of profit-oriented clinics operated by individual physicians).

Overall, there are 394 such health centres in the West Bank. Those include curative clinics, maternal and child health centres, and village health rooms. Of the total, 177 or 45 per cent are centres operated by the authorities and 217 or 55 per cent are run by the private Palestinian sector (including charitable societies, the popular committees, and international aid agencies). Tables 4 to 9 give a breakdown of the services these individual institutions provide by localities. Of the total, 15 per cent of these health centres are located in the Jenin district, 17 per cent in Nablus, 14 per cent in Tulkarm, 22 per cent in Ramallah, 3 per cent in Jericho, 11 per cent in Bethlehem, and 17 per cent in Hebron. Given the population size in each of the districts (table 3), a maldistribution of health centres favouring the centre - Ramallah and Bethlehem - at the expense of the periphery - Tulkarm, Hebron, and Jericho - is revealed. In addition to these health centres, UNRWA operates 26 clinics. Four of these health centres are located in the Tulkarm region, three in Nablus, five in Ramallah, four in Bethlehem, seven in Jenin, and three in Jericho.

For the Gaza Strip, there are some 70 clinics operated by the governmental system, in addition to various local and international institutions, and UNRWA. Of these, about 60 per cent are located in Gaza city where 30 per cent of the population of the Strip lives. These clinics, too, are mostly curative centres, with maternal and child health and immunization services operated largely by UNRWA.

With the exception of the UNRWA operated centres, at least two-thirds of the total number of centres operated by Palestinian non-governmental organizations work on a part-time basis. They are generally staffed by a nurse and part-time physician. Only very few, as can be seen from tables 4 to 9, can be described as having adequate services, including appropriate or sufficient staffing and programmes, although some have succeeded in extending their services to the different regions of the country. Patient loads are generally low, averaging between 4 to 12 persons daily (tables 4-8). Low patient loads appear to be due to inadequate and sometimes inappropriately trained staff, the lack of project continuity, the part-time basis of the operation, and insufficient if not complete lack of programme development. UNRWA services depict the other extreme, where an average patient load consists of 75 to 80 persons that a physician must examine within a period of three to four hours. This means that the average time a patient has with a physician is three to four minutes, which naturally raises questions about the

quality of the service being provided, although programmatic action is relatively well-developed and continuity of service has so far been assured.

The absence of the concept of programme is one of the main problems affecting the operation of governmental and private Palestinian health services. Most interpret and practise medical and health care in terms of the provision of curative services, often inadequately, and without a directed focus or a programmatic development designed to address the needs of special groups, such as diabetics, hypertension patients, and women. In addition, and with notable exceptions, these centres either undertake few preventive and promotive health activities or none. Environmental health and sanitation, school health, and screening programmes are missing from the lexicon of those who operate these centres. These remarks hold true especially in relation to governmental services, but apply also to the Palestinian private sector. The lack of the most basic materials such as medication and elementary equipment, furthermore, often precludes the possibility of providing adequate curative care.

Jerusalem appears to be better served than other areas. Those providing primary care services there include Palestinian and international non-governmental organizations, the Palestinian private sector, as well as the Israeli Ministry of Health service scheme. Table 10 lists the non-governmental organizations providing primary care services in the Jerusalem area by type of service provided. It should be borne in mind, however, that many of these services are provided not only to the inhabitants of Jerusalem proper, but to all those referrals coming from the West Bank and sometimes from the Gaza Strip. Examples include the general and specialty clinics of Al-Maqassed Hospital, and the services provided at the outpatient level by the Red Crescent Society Birthing Centre.

2. Mobile clinics and ambulances

Mobile clinic activity is relatively recent and became a real factor in primary health-care delivery in the 1980s. The concept and practice arose as a Palestinian response to inadequate health conditions and services overall, and the inaccessibility of rural dwellers to urban-based services in particular. It is around mobile clinic services that the inception and development of the popular health committees took place. Although other institutions continue to operate mobile clinic services in the area, the committees are responsible for most of these activities today.

The number of mobile clinic activities in the West Bank and Gaza Strip cannot be ascertained exactly, because many institutions operate these services on an irregular basis, subject to the general political situation. Additionally, the popular health committees which operate the clinics depend upon the volunteer services of their members. Although this approach is useful in terms of cutting health-care costs and engaging health professionals in the service of deprived sectors, it becomes problematic in respect to continuity of service and programme development.

The most active of these committees operates nine mobile medical clinic units (seven in the West Bank and two in Gaza Strip), five mobile dental units, two mobile dermatology units, and one mobile ophthalmology unit (see table 7). Another such committee conducts on average 6 to 10 mobile clinic

days monthly. Other institutions also operate mobile clinics in the area, but their services are irregular and cannot be counted as standard service delivery.

Overall, while mobile clinics have been useful in situations of emergencies, curfews, and states of siege - and those that are conducted seriously do deliver important services to the population - they remain constrained by the fact that the services provided are mostly curative, thereby limiting the introduction of preventive measures for health education purposes. However, mobile clinics have proven to be a useful form of training for young newly-graduated physicians and nurses from urban backgrounds who lack experience in their society. Additionally, mobile clinics are useful for forging links with communities that can later be used to establish permanent centres.

Ambulances have become abundant since the uprising began as the number of Palestinian civilians injured by army violence and requiring ambulance services rose to unprecedented levels. By 1991, about 40 ambulances were operating in the West Bank, and 30 in the Gaza Strip. Some are government ambulances and others are run by Palestinian providers of ambulance services. In general, while ambulances and equipment needed to operate emergency services exist and are adequate, there remains a serious shortage in manpower to operate these services effectively. The type of staffing needed includes properly trained ambulance drivers, paramedics, emergency nurses and physicians. The need is for better trained staff, rather than improved infrastructure. Of equal, if not greater, importance is the absence of a national health information system whereby information on injuries and emergencies could be part of a national emergency information and early warning system. The ambulance services cannot function efficiently in isolation of such a health information system.

Another pressing problem facing the delivery of ambulance services is the absence of a communication system that can link ambulances with hospitals. This is owing to the fact that the authorities have prohibited the use of wireless phone/communication systems in the West Bank and Gaza Strip. As a result, life support and assistance provided to the injured on their way to medical centres through consultation with specialists has not been possible. As it stands, they have been relegated to the position of functioning as mere transport vehicles for seriously ill patients. Meanwhile, the absence of helicopter transport of patients, used for distances of over 30 km in many countries, is of special relevance in the occupied territory, particularly in the Gaza Strip.

3. Secondary care services 50/

(a) Hospitals

There are eight hospitals operated by the Israeli authorities in the West Bank (one in Jenin, one in Tulkarm, two in Nablus, one in Ramallah, one in Bethlehem, one in Jericho and one in Hebron) and three in the Gaza Strip (two in Gaza city and one in Khan Yunis (table 11)). The Palestinian private sector operates 13 hospitals in the West Bank (5 in Jerusalem) and one in Gaza, for a total of 21 hospitals in the West Bank and a total of 4 hospitals in the Gaza Strip. (It should be noted that in contrast to residents of other

areas of the West Bank and Gaza Strip, residents of east Jerusalem also have access to secondary and tertiary care schemes run by the Ministry of Health. Table 12 also shows a breakdown of the Palestinian and international non-governmental organizations services that are provided to east Jerusalem residents by type.)

Field research shows that the bed to population ratios published by the Israeli authorities do not correspond to facts. Consider, for instance, the following comparisons: government sources state that al-Watani Government Hospital in Nablus contains 86 beds when field research conducted by the author revealed only 60 beds; Israeli figures cite 63 beds in Tulkarm Government Hospital, the author found only 35 beds; the Beit Jala Government Hospital, according to official sources, contains 64 beds when field checks revealed 56 beds; and the Hebron Government Hospitals are said to have 103 beds when in reality there were only 86 places (table 13).

Consequently, the ratio of hospital beds to population based on the author's field work indicate that the bed/population ratio in the West Bank (including east Jerusalem) and Gaza Strip is 1.4 beds/1,000 persons and 1.2 beds/1,000 persons, respectively. Additionally, even with this low ratio, data based on regional variations further demonstrate the shortage in hospital beds in peripheral areas (table 14). For instance, in east Jerusalem, the bed/population ratio is 3.4/1,000, since hospital and birthing centre services are readily available and well staffed (table 14). Furthermore, most of these beds in Jerusalem are teaching beds and tertiary beds, though they are also used for secondary care purposes. In contrast, the bed/population ratio in Jenin is 0.45/1,000, in Tulkarm 0.5/1,000, in Hebron 0.5/1,000 and in the Gaza Strip 1.2/1,000 (table 14). Interestingly, this ratio reaches 2.4/1,000 in the Nablus district, indicating that Nablus fares better than most other regions in terms of hospital bed facilities. 51/

Thus, the hospital bed to population ratio of 1.4/1,000 in the West Bank and 1.2/1,000 in the Gaza Strip in 1988-1989 - an index of service availability - continues to be very low and compares unfavourably with the Israeli average of 6.1/1,000 obtained in the late 1980s. It is also lower than the ratio for Jordan which was at some 1.8 per 1,000 in the same period. The regional variations in this ratio are wide, in favour of the urban centres and indicate an unequal distribution of health services in the territory at large. Jerusalem exhibits an over-concentration of hospital beds dedicated primarily to tertiary care, which is mainly absent elsewhere in the West Bank.

What is even more disturbing is the observed negative relationship between the decreasing number of hospital beds since 1967, on the one hand, and natural population growth, on the other. For instance, while population increased by 21 per cent in the West Bank between 1974 and 1985, the number of beds in hospitals actually fell by 6 per cent. In the Gaza Strip, population grew by 26 per cent during the same period while the number of hospital beds fell by 13 per cent. In other words, it is apparent that claims concerning the positive development of the health services infrastructure in the occupied territory have, in effect, represented a reduction in the number of hospital beds from 2.2 beds per 1,000 people in the mid-1970s to 1.2-1.4 beds per 1,000 people in the latter part of the 1980s.

(b) Specialized care services

Specialized services in the West Bank and Gaza Strip hospitals, both governmental and private, have also been inadequate. The government hospitals continue to suffer from a shortage of funds and are inadequately staffed, stocked and administered. Not only are equipment and supplies insufficient, but many international organizations, including the World Health Organization, have noted that government hospitals lack essential services. For example, 100 per cent of the hospitals operated by the Government lack morbid anatomy services, 58 per cent lack stomatology, 94 per cent lack physiotherapy, and 82 per cent lack psychotherapy services. Laboratories and radiology services are rather primitive, having experienced no qualitative or quantitative growth for several years.

(c) The rising costs of health care

Throughout the years of occupation, the costs of care continue to rise beyond what most of the population is able to afford. The constant rise in the charges for hospital beds per night has recently reached US$ 170 per night, almost equivalent to the monthly wage of an average unskilled labourer. The costs of a one-night stay at an Israeli hospital for referral has reached US$ 450 for Palestinians. Because of this and because of the low level of technical services available in Palestinian hospitals and their inadequate quality, bed occupancy continues to be low, estimated at 74 per cent in 1987, in contrast to the 91.5 per cent in Israel in 1981. The rise in charges has therefore resulted in a parallel decrease in the number of in-patients. Furthermore, health professionals working within the governmental sector are poorly paid, earning on average one-half to one-third of what a physician can earn in the private Palestinian sector, and up to only one-fifth of what a physician earns by working with the foreign non-governmental organizations operating locally. Thus, increasingly, physicians and other health staff are being pulled into the private sector.

It appears that secondary care facilities operated by the Israeli authorities in the West Bank and Gaza Strip fail to meet the population’s most basic needs for reasons that are structural as well as financial. These reasons include: insufficient budgets, lack of control over services by Palestinian health professionals, low wages of health professionals, general demoralization caused by the inability to provide proper treatment, and the absence of strategies and plans for the further development of the health sector.

(d) Impact of occupation on Palestinian private secondary health-care services

While private hospitals and secondary care services continued to develop throughout the 1980s, this development was insufficient, erratic and uncoordinated. Restrictions on expansion imposed by the authorities posed the greatest problems. For instance, the authorities closed the Jerusalem Blood Bank in the early years of occupation, arguing that this service was available at Israeli institutions. Since then, Al-Maqassed Hospital has been trying to expand its blood banking services in line with demand, but the authorities would not allow this expansion, having refused to grant the necessary permits for infrastructural facility development. In the Gaza Strip, the Red Crescent

Society has been trying, for the past 12 years, to obtain a licence to operate a much needed paediatric hospital, but the authorities continue to refuse to grant this permit. In general, the issuance of permits by the Israeli authorities to operate needed health facilities has been one of the main problems facing Palestinian institutions in their attempt to develop the local health infrastructure.

(e) Secondary care for refugees

In both the West Bank and Gaza Strip, UNRWA generally takes responsibility for the health and medical care of 868,000 registered refugees, close to half a million of whom live in 8 camps in the Gaza Strip while around 100,000 live in 19 camps in the West Bank.

UNRWA policy regarding the provision of secondary medical services rests on the rendering of referral and support services to eligible refugees consisting of: (a) in-patient care at the UNRWA-operated hospital in the West Bank town of Qalqilia, or at subsidized hospitals; and (b) specialist and rehabilitative care, and other basic support services through contractual arrangements. UNRWA further provides partial, individual patient subsidies towards emergency life-saving treatment at the specialized health institutions available in the area of operation provided this does not involve long-term commitments.

Thus, with the exception of Qalqilia, UNRWA does not operate its own hospitals, but has devised subsidized hospitalization schemes with one hospital in the Gaza Strip and four in the West Bank, a 36-bed hospital operated by UNRWA in Qalqilia, and a 70-bed tuberculosis hospital in Bureij camp in Gaza. In addition, 75 mental health beds are available at the government hospital in Bethlehem for use by refugees.

UNRWA is also active in delivering preventive, sanitary and ancillary services to refugees, including family planning, communicable disease control, oral health, school health, water supply provision, waste and refuse disposal systems, and rodent and insect control programmes. In addition, since the intifada, UNRWA has established special emergency services consisting of both medical services and food programmes. Overall, it appears that UNRWA operates some of the most comprehensive and well-planned essential services in the West Bank and Gaza Strip. However, given the high patient load with which these services must contend, maintaining quality remains a challenge.

4. Tertiary care services

A tertiary care sector in the full sense of the word - that is, a comprehensive referral sector with specialties and super specialties, where training and research also takes place - is virtually non-existent in the West Bank and Gaza Strip. Although some institutions such as UNRWA describe their services in terms of tertiary care as well, these services continue to lack elements such as training or research infrastructure within these institutions. It should be pointed out, however, that the potential for the development of such services exists given the presence of secondary care hospitals and universities in the area. Attempts have been made to transform Al-Maqassed Hospital into a tertiary care centre. Plans are under way to begin specialized training programmes for interns and residents, in

conjunction with major international medical institutions. A nucleus for clinical research is currently being developed. Al-Maqassed is exerting strenuous efforts to improve and upgrade its services so that it can become a high-level specialty and referral centre for the territory as a whole. However it faces various types of difficulties, including the absence of physicians trained in a range of medical and surgical specialties. In addition, it continues to suffer from the constraints imposed by military rule, most notably licensing of new facilities, and expansion plans and the acquisition of work permits for Palestinian and non-Palestinian specialist non-residents to work in Jerusalem. Yet, despite these technical limitations, Al-Maqassed already effectively functions as a referral centre, serving patients from both the West Bank and Gaza Strip. This has been especially true since the uprising.

5. Other infrastructural facilities/services

Other infrastructural facilities consist of pharmacies, laboratories, and diagnostic centres, which provide needed services to the population. Other than those facilities that are found in the hospitals of the West Bank and Gaza Strip, infrastructural services are also found largely in urban areas, and sometimes in rural areas as well. Table 15 shows that, in total, there are 170 pharmacies, 39 laboratories, and 26 diagnostic centres in the West Bank, excluding east Jerusalem, in addition to those services found in the area's 21 hospitals. In the Gaza Strip, there are three officially registered laboratories with qualified personnel, all of them located in Gaza city. There are numerous other ventures called laboratories which operate in private clinics without qualified staff. There are 115 pharmacies in the Strip, 60 of which are found in Gaza city, with the rest scattered all over the Strip. In the entire Gaza Strip, only one diagnostic centre exists, operated by the only radiologist, who combines his work at the governmental hospital with his work at the centre.

A closer look at table 15 shows a bias in the availability of these services in favour of urban areas at the expense of rural areas and refugee camps. For example, of the 170 West Bank pharmacies, 73 per cent are found in urban areas. Of the 39 laboratories in the occupied territory, 95 per cent are located in towns, and none of the diagnostic centres are located in villages. Regional variations similarly favour urban areas where the centre absorbs the bulk of services.

Although awareness is increasingly building around the need to develop such services and assure quality control, much still needs to be done in terms of improving the quality of service. Supervision and proper management need special attention. The problem is twofold. On the one hand, the services operate without the presence of an authority that can assure quality control, while Palestinian health professionals who are aware of this problem have no power to implement guidelines for service quality. On the other hand, the pressing needs of the population for given services means that local institutions often start up without the proper quality control. Much needs to be done in the area of standardization and quality of services.

It should also be mentioned that the uneven distribution of health services in the territory follows a pattern observed for other services as well. This geographic imbalance is due to a constellation of forces operating

together to produce the current picture. Prior to 1967, modern services appeared in the main town centres long before basic governmental health and educational services were introduced into the countryside. As the system serving the rural areas was being developed, the area fell under Israeli occupation. Since that time, further distortions have taken place because of budgetary and political considerations, which affected potable water supplies and the establishment of effective rural health schemes. Concomitantly, Palestinians continued to develop their own infrastructure despite the serious difficulties imposed by the military Government. The difficulties of penetrating the countryside, combined with the understandable desire of professionals within the private sector to practise in urban settings, where living conditions are better, and where the transportation problem is not as acute as in the rural areas, provide additional explanations for the current situation. Thus, given these difficulties, and in the absence of a legislative and coordinating Palestinian body with authority, practitioners and institutions had opted for what had been possible or preferable.

6. Rehabilitation services

With the uprising and the rising number of young people who have become disabled due to army violence, disability and rehabilitation services have become the focus of considerable debate, planning and project implementation. Nevertheless, disabled Palestinians continue to suffer from inadequate rehabilitation services, especially at the primary care level. Every year since 1987, up to 1,000 young Palestinians have been rendered in need of rehabilitation services on a permanent or semi-permanent basis. These are of course in addition to those disabled Palestinians in society at large, who were almost forgotten until disability was raised to a heroic stature with the uprising. A conservative estimate, based on a 2 to 3 per cent rate of disability in society at large, places 30,000 to 37,000 persons in the West Bank and 16,000 to 25,000 persons in the Gaza Strip in need of rehabilitation services probably for life. Such figures demand that the health and sickness requirements of the disabled in Palestinian society be incorporated in a comprehensive manner into future planning for health services.

(a) Institutions serving the disabled

There are currently at least 57 institutions providing rehabilitation and physiotherapy services to the disabled in the West Bank (table 16) and 5 in the Gaza Strip (table 17). Of these, eight hospitals in the West Bank and one in the Gaza Strip provide physiotherapy services on an in-patient basis primarily, but also to out-patients, as the only form of service provided to the disabled.

All of the institutions serving the disabled in the Gaza Strip are located in Gaza city. Of the 57 institutions located in the West Bank, 61 per cent provides services in the central area where 30 per cent of the population lives, while 28 per cent provides services in the north where 50 per cent of the population lives and 7 per cent provides services to 20 per cent of the population in the south (table 17). This constitutes yet another example of the unequal distribution of services in favour of the centre.

(b) Type of services provided

The majority of rehabilitation facilities operating in the area are of the institutional type, or of the secondary care variety. Al-Maqassed Hospital offers perhaps the most advanced and specialized care possible, especially for those injured by army violence. As noted, it cannot be considered (technically) as a tertiary care centre because of the absence of high-level specialties, equipment, training facilities and manpower. Nevertheless, it serves as a referral centre for the treatment of the intifada disabled, with cases accepted from all over the West Bank and Gaza Strip.

Two other secondary rehabilitation care institutions currently operate in the area, the Patient's Friends Society Rehabilitation Centre in Ramallah and the Arab Society for the Handicapped in Beit Jala. Both have in-patient facilities covering approximately 50 beds. Both cater to the needs of the severely disabled, most notably spinal cord injuries. As for the rest of the institutions serving the disabled, the majority of them provide services that lie between primary and secondary care since they are not community-based, but rather provide institutional care in the city nearest the domicile of the disabled person.

The emphasis on the type of rehabilitation provided by most of these institutions is on physiotherapy and machine-oriented rehabilitation. Of the 43 institutions in the West Bank, for example, 51 per cent offers physiotherapy services, and 16 per cent offers counselling to their clients (table 18). In Gaza Strip, rehabilitation has, until recently, been conflated with physiotherapy. In both the West Bank and Gaza Strip, rehabilitation tends to take the form of mechanized biomedical services, with a heavily institutionalized approach, at the expense of the more extended view of rehabilitation which encompasses concepts such as social integration and rehabilitation at the community level. While institutional services are clearly needed, they appear to have developed at the expense of other types of services needed by the disabled, creating an imbalance in the types of services provided. At the moment, however, plans are under way to redress this problem. The newly formed National Committee for Rehabilitation is planning to implement both institutional and community-based projects.

7. Geriatric services

The number of elderly people in the West Bank and Gaza Strip is rising, reflecting a rise in average life expectancy as well as increasing population growth. People at 65 years and above, living in the area today, comprise about 5 to 6 per cent of the population, or 75,000 to 90,000 people. Nevertheless, older people are least considered when planning for a health services delivery system in the area.

(a) Location of geriatric services

Twenty-three homes and institutions care for the elderly in the West Bank and three in the Gaza Strip. Of the 21 institutions in which information was available, seven were located in the Bethlehem District, four in Jerusalem, two in Ramallah, two in Jericho, two in Nablus, one in Hebron, and one in Jenin. Those located in the Gaza Strip operate in Gaza city itself. Like

other services, geriatric services are concentrated in the centre of the territory, where more than half of the institutions are located, but where no more than one-quarter of the population lives.

(b) Residents of geriatric institutions

The total number of residents in geriatric institutions in 1991 was 698 persons, or just 1 per cent of the total number of people at 65 years and above in the territory. Evidently, the large majority of elderly in the West Bank and Gaza Strip are cared for at home. Of the total residents, 9 per cent were reported as having urinary incontinence, 6 per cent fecal incontinence, and 81 per cent suffered from mild to severe dementia, which stands in sharp contrast to the estimated 40 to 70 per cent rate of dementia among institution residents found in industrialized countries. Thus, it appears that those individuals who end up in institutions are the ones whose families can no longer care for them.

(c) Type of services provided

It is clear that the type of geriatric services available in the occupied territory focus largely on housing for the elderly and the destitute. With exceptions, such as food delivery by two of the institutions, essential facets of home care are completely unavailable to those elderly living at home, who constitute 99 per cent of the elderly population in the territory. Most notably, they lack proper medical and preventive health-care services. Geriatric institutions, however, lack the most essential of services as well. Medical services are provided by part-time untrained doctors who prescribe medication and issue instructions for transfers to hospitals. Psychological counselling services are principally composed of administering medication which, coupled with the lack of entertainment and general stimulation, might be a contributing factor to the high rate of mental health problems noted among the residents of these institutions. Physiotherapy and exercise services are almost entirely lacking. Even basic cleanliness and sanitation appear to be a problem. Indeed, every effort must be made to consider the medical and health needs of the elderly in both institutions as well as in homes when planning the system of Palestinian health service delivery.

Chapter III

MEDICAL AND HEALTH-CARE PERSONNEL

A. Physicians

1. General distribution

According to the Union of Palestinian Physicians, there are 1,185 doctors currently working in the West Bank including east Jerusalem, in addition to 600 in the Gaza Strip. The physician/population ratio is around 11 physicians per 10,000 people in the West Bank, and 10 physicians per 10,000 in the Gaza Strip. This contrasts sharply with the ratio of 28 doctors/10,000 people for Israel and 24 doctors/10,000 people for Jordan in the latter part of the 1980s. Of the total number of physicians in the West Bank, 19 per cent are registered in the Jerusalem district, 13 per cent in Ramallah, 9 per cent in Bethlehem, 16 per cent in Hebron, 24 per cent in Nablus, 11 per cent in Tulkarm, and 8 per cent in Jenin (table 19). In the Gaza Strip, the majority of doctors - at least 450 - work in Gaza city in the hospital sector, leaving the rest of the Strip starved for manpower resources in health services.

2. Specialization and training

Of the total number of physicians in the West Bank, only 14 per cent are specialized and have passed the Jordanian Specialty Board examinations. An additional 14 per cent are specialists, but have not sat for or passed the Board exams. This leaves a substantial 72 per cent of all physicians working without any specialty whatsoever except their general practice certificates. Given that women constitute only 7 per cent of total physicians, women specialists represent only 1 per cent of all specialists (table 19). Overall, about 30 per cent of the physicians in the Gaza Strip are specialized.

The low level of specialization relates to several factors. The most important appears to be the lack of options for specializations that Palestinian physicians face, owing to financial and technical considerations. Language skills might also be a factor contributing to the difficulty in pursuing specialized training since such training is often given in the English language. Social factors might also account for the low proportion of female specialists and female physicians overall.

Thirty-nine per cent of the physicians in the Gaza Strip were trained in Arab countries, primarily Egypt. In the West Bank, 39 per cent were trained in Arab countries as well, including Egypt, and to a lesser extent, Syria, Iraq, Lebanon and Jordan. Thirty-seven per cent were trained in the former Soviet Union and in eastern European countries, including the Czech Republic, Slovakia and Romania. Seventeen per cent were trained in western Europe, with the majority in Italy, Spain, Germany, France and the United Kingdom. Greece and Turkey provided training for 5 per cent of physicians, while Pakistan and India trained 2 per cent (table 20).

The physician population in the West Bank is rather young, with 52 per cent having graduated in the 1980s, 31 per cent in the 1970s, and only 17 per cent in the pre-1970 period (table 21). An increasing number of them have completed their training as doctors in more recent years. Tables 20

and 21 indicate that this trend was probably related to the educational opportunities offered by eastern European countries to disadvantaged sectors of the population during the 1970s and 1980s. Scholarships were provided as direct assistance to the Palestinian people; they were also granted through political organizations. Given the dramatic political turn of events in eastern Europe, however, one would expect a reversal of this trend. If so, planning for a health-service delivery system for the occupied territory must take into consideration the need to find alternative possibilities for the future training of Palestinian physicians and specialists.

3. Employment of physicians by sector

Table 22 shows the level of employment of West Bank physicians in each of the three health sectors operating in the West Bank. Of a total number of 782 physicians with known places of employment (or 66 per cent of the total number of physicians working in the West Bank), 17 per cent work in government hospitals, and only 5 per cent work in the government-run public health sector, including physician administrators and heads of sections. The over-representation of physicians in secondary care services is problematic because 70 per cent of the West Bank population live in rural areas where accessibility to secondary services is limited. Moreover, secondary care tends to be more costly than primary care. The picture is similar in the Gaza Strip, with 67 per cent of local physicians working in hospitals. The remainder are scattered between the Palestinian and international public and primary health-care network, and the purely private sector health facilities.

Overall, only 22 per cent of all in the West Bank physicians work within the government health-services system. The lack of personnel within the government medical and health sector is indeed one of the main reasons for the failure of the current system to fulfil even the most rudimentary needs of the population.

The Palestinian private sector absorbs the bulk of the physician population of the West Bank. Table 22 also shows that, of the sample of 782 West Bank physicians, a total of 582 or 74 per cent work within the Palestinian private health sector. As was observed earlier, however, this sector is composed of Palestinian non-governmental organizations operating primary and secondary care services in addition to private practices. The latter absorbs 170 physicians or 29 per cent of those working within the private sector, and 22 per cent of the total in all sectors. In contrast, 412 or 71 per cent of those working within the private sector (or 52 per cent of the total) work for non-governmental organizations involved with hospital and primary care. Of these, private sector hospitals employ 245 physicians (representing 31 per cent of all physicians working within the West Bank health system) while 167 physicians (or 21 per cent) work within the West Bank primary care structure. UNRWA employs 31 physicians or 4 per cent of all physicians in the West Bank, and they all work at the primary care level. In summary, 48 per cent of West Bank physicians are currently working in the hospital system, both governmental and Palestinian, 30 per cent in the public health system or at the primary care level, and 22 per cent in private practice. Thus, there is a clear need to address the prevailing distribution of medical manpower, which tends to favour the centre and centralized curative care at the expense of the periphery and primary, preventive health care.

4. Physician specializations

Although data are available only with regard to those specialist physicians who have passed their Board examinations, the breakdown of these specialties discloses important information (table 23). Among those who passed their Board examinations, 23 per cent are specialized in various areas of surgery, 20 per cent in internal medicine, 17 per cent in paediatrics, 16 per cent in obstetrics and gynaecology, 7 per cent in ear, nose and throat, with the rest scattered over a range of other medical categories. Those without Board certification were unable to cross through to Jordan to sit for the examination. Most were trained in eastern European countries. Many opt to specialize in western countries which creates a peculiar problem: once specialized, some tend not to return to the area, choosing to seek work elsewhere, especially in the Arab countries of the Persian Gulf, although the Gulf war may have changed this. In this way, internationally funded training assistance schemes have, in certain instances, unwittingly contributed to the already existing human resource deficit, by supporting the education of West Bank and Gaza Strip physicians who choose not to return. This dilemma calls for the rethinking of specialization schemes, and points to a need to develop specialty training programmes locally.

The West Bank and Gaza Strip continue to be in need of developing various disciplines of medicine. Specialties such as radiology, pathology, psychiatry, and all strands of public and community health, including epidemiology, statistics, health education, management and planning are either absent or poorly represented. While on the one hand, the specialties of physicians currently working in the area form the skeleton of a comprehensive health-care system, on the other hand, insufficient attention is being paid to the public health and management aspects of operating a health-care delivery system. The lack of attention to these two key areas impedes the consolidation and further development of the health-care delivery system in the West Bank and Gaza Strip.

B. Nurses

1. Nurses by district of employment

There are four categories of trained nursing/midwifery staff working in the West Bank and Gaza Strip: registered nurses, with Bachelor degrees from abroad or from either one of the two local institutions offering this type of training; licensed practical nurses, trained in one of several local institutions providing a two-year training course in this field; registered midwives, who are registered nurses with an extra year of specialty midwifery training, usually obtained locally; and practical midwives, who have had two years of training in local institutions.

Table 24 shows the distribution of nurses (all categories included) by district and by employment sector for the West Bank and Gaza Strip. As may be noticed, Jerusalem absorbs 33 per cent, followed by Nablus with 20 per cent, while Bethlehem has 15 per cent, Hebron and Ramallah, 10 per cent, Tulkarm, 7 per cent; Jenin, 4 per cent; and Jericho, the most disadvantaged region, only 1 per cent of the total number of working nurses. Compared to the population figures for each of the districts noted above, there is a

maldistribution of nursing staff which exists with many more nurses in the centre at the expense of the periphery, most notably in Jenin/Tulkarm, Hebron, and Jericho.

Table 25 shows the average number of nurses per 1,000 population by district. Jerusalem is at the top, with 3.3 nurses/1,000 people, followed by Bethlehem and Nablus, with 2.4 nurses/1,000 people and 2 nurses/1,000 people respectively, and Jenin, having the lowest ratio overall, even when compared to the Gaza Strip. The total West Bank average is 1.4 nurses/1,000 people; in Gaza Strip it is 1.5 nurses/1,000. Thus, for the occupied territory as a whole, the ratio of nurses to population continues to be seriously insufficient.

2. Nursing specializations

The distribution of nurses by sector is also skewed. Table 26 shows that of the total number of nurses, 73 per cent are working in hospitals in the West Bank and 64 per cent work in hospitals in Gaza Strip. Given that the majority of people continue to live in villages and refugee camps, these figures are further evidence of the maldistribution of medical and health manpower resources which may be observed at all levels of the health-care system. This problem must be seriously addressed by policy makers and planners. It holds true for both the public and private health sectors.

Although nursing care is one of the most important aspects of medical and health care, it remains more underdeveloped than probably any other area of the health-care delivery system. An example of this kind of underdevelopment is the almost total absence of nursing specialization. Table 26 provides a breakdown of the number and type of specializations among nurses in both the West Bank and Gaza Strip. Note that in most instances, specialization refers to training in local institutions delivering health and medical care services, and rarely means complete specialization in an accredited degree programme either locally or abroad. Even then, table 26 indicates that a meagre 6 per cent of the total number of nurses in the West Bank, and a tiny 1.4 per cent in the Gaza Strip have any form of specialization. Thus, not only are certain specialties missing altogether, but those who are specialized could not possibly fulfil all current needs. Clearly, much needs to be done to prepare nurses for the various types of health and medical needs of Palestinian society, both now and in the future.

C. Pharmacists, dentists, radiologists and medical technicians

Table 27 shows the distribution of the 310 pharmacists working in the West Bank by region. Once again, it is observed that Nablus has the largest number of pharmacists with 25 per cent of the total, while Jerusalem has 16 per cent, Ramallah 15 per cent, Tulkarm and Hebron 12 per cent, Bethlehem 10 per cent, Jenin 9 per cent, and Jericho 2 per cent of the total. They work largely in the urban areas. The quality of service in this sector is variable, and depends largely on individual initiative. In general terms, however, the absence of supervision and the lack of regulations allow pharmacists to act freely. Thus, prescription drugs are often dispensed without physicians' orders. Pharmacists have also been known, at times, to both diagnose and treat the patient, greatly superseding their mandate, and reducing the overall quality of service.

Table 28 shows the distribution of West Bank dentists by region. There are 275 dentists in total, with Nablus claiming the largest number or 23 per cent, Ramallah and Jerusalem each 16 per cent, Hebron 15 per cent, Tulkarm 12 per cent, Jenin 10 per cent, and Bethlehem 8 per cent. Here, too, the majority of dentists work in urban areas. Problems relating to supervision and quality of services are similar to those encountered with the other types of human resources working in health care in the area.

Although data on laboratory technologists and medical technicians could not be obtained in detail, it was possible to estimate roughly their numbers. In the West Bank, an estimated 80 laboratory technicians have at least a Bachelor degree (39 technicians in 39 labs and at least 40 in hospitals). There are 26 radiologists working in the 26 diagnostic centres of the West Bank, in addition to some 20 radiologists working in the hospital sector, bringing the total to 46.

The technical base of the medical and health-care sector is clearly underdeveloped, and in need of substantial support, both material and in terms of manpower training. As stated previously, a fundamental problem is that of the training of manpower that operates these centres. Another is the absence of adequate supervision and assistance, placing workers in isolation and without much technical support for improving their work, or maintaining adequate standards. It does seem clear that management and coordination problems contribute to the deficiency of the system, particularly with regard to the unnecessary duplication of services and manpower. On the whole, this sector is in clear need of more attention by policy makers and planners.

Overall, training and supervision are key problem areas in health-care delivery in the occupied territory. Training needs include specialization training in areas of medicine and the allied health professions that are inadequately represented, or entirely missing; continuing education for those who are practising, and who continue to need upgrading courses; and special upgrading/in-service training courses for those who have initially been inadequately trained. Supervision, encouragement, and technical assistance are also important components of quality health-care delivery.

D. Village health workers

The concept of village health work is relatively recent in the area. It emerged with the formation of the popular health movement and its emphasis on finding alternatives to the biomedicalized health-care system that existed until the late 1970s. The first experience in training village health workers took place at a university in the West Bank in the early 1980s, in response to a new awareness of the need for this type of health-care provider. Village health workers were conceived to be the main health workers at the community level. Working in their own communities, health workers performed various tasks, from assuming administrative responsibility for the running of clinics (e.g., accounting, record-keeping, opening and closing clinics) to more concrete health-care activities. Village health workers assist physicians and other health professionals, conduct home visits, provide health education and counselling to the population, operate maternal and child health-care services with the assistance of specialized human resources, care for the environmental health and sanitation of their community, and refer patients to specialized service centres when in need.

This pilot training programme was fraught with problems from its inception. Because the programme was affiliated with university training, it was impossible to find women who could leave their homes and families to train for two years in urban areas (having met the requirements for admission). Yet, it was important to train women, for only they can have access to homes in Palestinian society. Instead, male health workers were trained. In the end, the programme was terminated because male workers could not fulfil the role. Another problem related to the lack of supervision and follow-up of these health workers, who had to function in a state of isolation in their villages, and without the technical and moral support needed.

The experience of the subsequent popular movement training initiative was built on the experiences of the University training scheme. In this new scheme, only women from their own communities were trained, and only when plans included the establishment of health centres in these communities. That is, the health worker was seen as an integral part of a comprehensive programme, and not an isolated segment of the health-service system. Women were chosen by their own communities, and they were followed up after training by an extensive system of supervision and continuing education, all within the context of the health-care centre in which they worked. To date, this programme has graduated over 120 women as village health workers, and the large majority are employed within their own communities. Other groups have since followed suit, with varying degrees of success.

The training of village health workers appears to be an important part of the continued development of the health-care delivery system in the territory. They are appropriate, and can communicate easily with people at the grassroots level since they come from the community itself. Women can have access to other women and children, the main focus of health-care provision, and are less expensive to employ than other types of health manpower. While the role of the nurse continues to be important in primary health care, the roles of nurse and village health worker are not mutually exclusive.

E. Indigenous medical practice and practitioners

1. The system

Indigenous medical practice in the area is based on classical Arabic medicine as well as a mixture of other practices apparently incorporating historical social transformations. Methods of healing can be divided into four categories: physical, herbal, dietary and spiritual. Practitioners have been handed down the gifts of **al-Tib al-Arabi** (Arabic medicine) from their ancestors.

Physical means of healing include **al-tajbir** (bone-setting), **kawi** (cautery), **takhrim** (pricking with a needle), **kassat hawa** (cupping), and **tamlis** (massage). These constitute, by far, potentially the highest risk of all categories of traditional medicine. Not only are they of questionable efficacy and value, but they have also been known to exacerbate existing conditions (as in the case of bone-setting) and cause new ones (as in the case of cautery). Herbal means include both the ingestion and the external use of some 70 local varieties of herbs and plants. Some of these are known to contain physiologically active compounds, whose therapeutic value has been

established by modern scientific medical standards. Those include **yansoun** (Pimpinella anisum), **mayramieh** (Saliva triloda), and **ja'deh** (teucrium polium) among many others that are known to elicit a therapeutic response. 52/

Dietary means are often relied on for healing as well as for the prevention of disease. Cold and light foods are often used to help a patient through an illness, and special diets are prescribed for specific ailments. These include: rice water for gastrointestinal disease, abstaining from milk for flatulence and diarrhoea, and ingesting barley and parsley water for the treatment of urinary tract disease. Spiritual means abound and include prayers, among other things. One rationale or underlying principle applies to spiritual means of healing: the intention to drive out the evil eye or evil spirit from the sick person.

2. How disease is perceived

In this system of explaining health and illness, the etiology of disease is perceived as being multiple. A mixture of modern explanations and older forms are often combined to describe the process of becoming sick. For instance, hypertension is viewed as being brought about by a constellation of forces. Age is one factor, but it only predisposes a person to disease and does not necessarily cause it. Ultimately, it is **al-ghadab** (anger or emotional upset) that precipitates the disease rather than age or other biological processes. Thus, the occurrence of disease is explained, at least in part, in social-relational terms, as well as in biological terms.

3. Preventive health behaviour

Preventive and health-promoting behaviour is an intrinsic part of the local belief system, even though wider changes have had an impact on modifying or rendering obsolete some local practices to this end. If a local **dayya** (midwife) delivers a child, for example, she applies **kuhl** (eye liner) to the ridge of its eyelids in order to prevent the occurrence of eye disease. People generally avoid exposure to the cold and to air currents when the body is hot, especially after a bath, and when the hair is wet. Eating eggs in the evening is believed to cause stomach problems and is therefore avoided. For the same reasons eggs and fish are rarely combined in the course of a meal. A variety of gadgets and amulets is attached to the body and to bedding, especially children's, in order to prevent the evil effects of the envious eye.

4. Mixing old with new

Traditional medical practices in selected localities and especially in the West Bank persist, albeit in a modified form. 53/ What has happened over the years is a process of adaptation to new socio-economic realities; specialized practitioners - the **dayya**, the **cauterer**, and the specialized herbalist - are on their way to extinction. Instead, a popularization of practice has taken place involving a decentralization of traditional operations in the direction of self-medication. The advent of modern scientific medicine, coupled with the ageing of the traditional specialists and the concomitant lack of interest among the younger generation to learn or

maintain the old specialist-centred system, are contributing to the transformation of the old system into a tradition of popular medicine practised by most people.

Consequently, when planning for health services it is important to remember that, in the first instance, people are likely to attempt to use popular indigenous means of healing themselves; if this fails, they will then seek the help of the modern scientific medical establishment. Thus, both systems are likely to coexist. Moreover, some traditional practices, such as the use of herbs and plants in the treatment of correctly diagnosed disease and the promotion of health can in fact be helpful. This is why it would be worthwhile to examine the study of traditional practices with the view of incorporating useful elements into the Palestinian health-care system.

Chapter IV

CURATIVE AND PREVENTIVE HEALTH CARE IN THE WEST BANK AND GAZA STRIP

It is clear from the data already presented that, overall, the state of curative and preventive medicine in the West Bank and Gaza Strip leaves a great deal to be desired.

A. Curative care

The problems of curative care are many. To begin with, three systems of curative care delivery exist without adequate coordination or cooperation among them. As is discussed below, coordination has proven to be one of the most difficult hurdles for the continued development of the Palestinian medical and health-care system. The government system has been under the direct and total control of the Israeli military. Palestinians could not obtain from governmental health services the data needed for a thorough examination of the system, let alone have any impact on improving the system.

Governmental curative care remains underdeveloped. As has already been shown, an insufficient number of medical and allied health staff are employed by the governmental health services, where the majority of people ought to be seeking health care. Consequently, it is impossible to envisage how the governmental curative system could ever adequately fulfil the basic curative care needs of people under the prevailing conditions. The staff employed by the governmental curative care institutions is poorly paid, often working under impossible conditions. This exacerbates the feelings of demoralization prevalent among the staff, and creates conditions for a drain of medical resources into the private system.

As noted, equipment and general technical support in governmental curative care centres, including very basic necessities, continue to be very poorly developed, and in fact, have regressed in some instances. In these centres many critical specialties such as pathology and radiology are either poorly developed or completely absent. Even simple medication such as ampicillin is known not to be available at all times. Furthermore, supporting services such as properly operated laboratories, and the availability of diagnostic tests are either minimal, or completely absent. As stated earlier, inadequate resources, unsatisfactory policy formulation, and poor planning are key among factors contributing to this situation.

In addition, the ever-rising cost of health care makes it increasingly more difficult for the population to rely on these already deficient services. What is needed to improve and expand these governmental services is a serious commitment on the part of the authorities to either assume or delegate responsibility for the population’s health care. This commitment would be characterized by: the definition of clear health policies and plans based on scientific investigations of needs and priorities; the restructuring of the health-care system so that plans could be implemented; the requisite allocation of funds; and the establishment and operation of supervisory, monitoring and evaluation systems from which future policies and plans could be drawn.

It should be re-emphasized that the rise and development of an extensive non-governmental organization (NGO) health sector (i.e., the subsidized services of charitable societies, and the medical and health programmes of the Palestinian popular movement) occurred precisely because the governmental health sector could no longer meet the people's needs, while the private profit-oriented sector was too expensive for the majority of people to utilize. Despite the growth of the NGO sector in an attempt to fill the vacuum, the role of the private (profit-oriented) sector has remained important.

The possibilities for (under prevailing conditions) improving the Palestinian NGO sector are probably better than for the governmental sector, although both have been constrained by the political setting. These constraints include serious restrictions on activities, 54/ as well as internal problems of poor coordination and factionalism. Nevertheless, this sector flourished in the 1980s. This was owing to several factors, including the awareness on the part of Palestinians of the need to create an alternative, independent Palestinian medical care structure for the occupied territory. International aid agencies have played a vital role in the development of this sector through donations of funds for sectoral development.

As it stands, the Palestinian non-governmental sector continues to be too poorly developed to meet the total curative needs of people. Much more should be done, including rational policy formulation and planning, establishment and operation of coordinating and supervisory bodies that can look at the system as a whole, the institutionalization of in-service training and continuing education for this sector, including human resources development in specialties and services that are still very primitive or missing altogether, such as forensic pathology, epidemiology, gastroenterology and medical statistics.

Perhaps one of the most important problems affecting the Palestinian private curative care system is the approach taken to curative care and health care in general. As noted earlier, there is often unwarranted emphasis on biomedicalization and on the improvement of technical facilities, sometimes at the expense of appropriate development of medical and health manpower. This problem appears to be rooted in an attitude towards medical and health care that over-emphasizes equipment and under-emphasizes people and their capabilities. The problem is compounded by the diversity of educational backgrounds, leaving individuals without guidelines for action. For instance, the large majority of curative centres in the area would very much like to have CAT scanning facilities but very few are requesting funds or assistance for the in-service training of interns and residents, who are in clear need of such training, particularly in light of the fact that they were all trained in different places, and therefore lack a unified system of curative care.

Palestinian curative institutions face additional problems that derive from inadequate curative care provision for the entire population. These include the difficulty of raising funds to cover operating budgets on a continuous basis. Yet, medical and health work geared towards reaching the majority of the population, especially priority groups such as women and children, cannot operate without the crucial factors of subsidization and continuity. As it stands now, quite a few international aid agencies

operating in the area prefer to support infrastructural costs of health projects rather than long-term operating costs. While the rationale behind such policy may be understandable from the point of view of the agency, it can have serious drawbacks for the operation and continuity of health projects.

Another problem is the difficulty of coordination among the many Palestinian institutions providing health care, and between these institutions and two other sectors, UNRWA and the Government. The governmental sector is inaccessible overall, despite the individual efforts of Palestinians working within this sector. Such attempts remain incidental given that Palestinians have had no control or authority within the system. Coordination between UNRWA and Palestinian health-care institutions has been attempted, but these efforts are restricted by the difficulties encountered in drawing up policies and plans. In the absence of an indigenous governing body with the authority to coordinate, steer and regulate policy, it has been difficult indeed for institutions to arrive at similar conclusions regarding priorities in health-care delivery. Even when agreement has been possible, adherence to plans has been weak, in the absence of an enforcing body.

B. Preventive care

Preventive services follow a pattern close to that of curative services. Governmental services in this respect are either very deficient or totally non-existent. The Palestinian private primary health-care infrastructure is still weak, although strengthened considerably by the rise of the popular health movement which gave high priority to the delivery of primary care and preventive medicine in rural and disadvantaged areas. Yet, this movement is constrained by the pervasive effects of a prevailing health-care system where, even at the primary care level, emphasis is placed on curative as opposed to preventive medicine. Even when services are being provided at the primary care level in rural areas and refugee camps, the tendency is still towards curative care at the expense of preventive care, health education, and the improvement of the general environment. This problem, in turn, has often led to increased expenditure on equipment and technical aids that are placed inappropriately at the primary care level.

Clearly, western scientific curative and centralized biomedicine care delivery is needed and has its place within the health and medical care delivery system of the West Bank and Gaza Strip. However, locally, equipment and technical aids are being substituted for health and medical care services programmes geared towards proper curative practices and preventive schemes. Thus, the issue is not one of pitting one strand of medicine against the other. The main focus is the way in which both types of medical care can be appropriately incorporated within the medical and health-care system.

Chapter V

FACTORS AFFECTING THE HEALTH CONDITIONS OF THE PALESTINIAN PEOPLE

A. Israeli policies and practices

Since the onset of military rule, the Israeli authorities embarked on policies that, at best, neglected the existing governmental health services, and at worst, worked towards the disintegration of the health-care infrastructure in the territory. The natural development of this sector was impeded by tight restrictions, including the denial of funds, the blocking of further development, and the linkage of health-care institutions to their Israeli counterparts, particularly for specialty services. Official policy was that any need for specialized services could be readily met through referral to Israeli hospitals. Thus, within 10 years, governmental health services were reduced to a situation of total dependence. In addition, by the mid-1980s, it was becoming apparent that the governmental health services suffered from serious inequities in distribution, especially in the rural areas where the majority of people live and where primary health care was largely neglected.

Furthermore, it should be pointed out that the authorities also made it difficult for Palestinian and international non-governmental organizations alike to assist in building the non-governmental health services infrastructure. As stated earlier, restrictions placed on these institutions included the denial of permits to establish and operate health services, limits on fund-raising, and on data collection, in addition to the harassment of medical staff and patients in clinics. Moreover, official restrictions existed on improving sanitary and environmental health conditions in deprived rural areas. Thus, permits to provide piped water supplies to communities were refused. Villages linked to the national electricity grid were vulnerable because electricity, needed for refrigeration of medicine or for the establishment of a rural clinic, became a political tool. Another dimension of the problem is the serious impact of violence on the physical and mental health of the population, escalating to unprecedented proportions since the uprising.

B. The impact of changing cultural factors and social behaviour on health

Other than a general state of underdevelopment that continues to affect the region as a whole, coupled with the serious level of unemployment that has emerged more recently, two further factors have a significant bearing on health status. The first relates to the changing pattern of food consumption that has taken place recently, as a result of changing lifestyles.

The years of occupation brought with them many economic changes radically affecting social structure and the way people live, behave and eat. From a diet that basically relied on staples grown locally, such as wheat bread, vegetables and fruit, the population gradually shifted its diet to processed foods, largely imported. Land confiscation, the control of water sources, and the increasing fragmentation of land entrained growing neglect of the land. It became impossible to sustain and reproduce the family unit by relying solely on the family farm.

Wage labour thus began to replace agricultural labour on the family farm as a mode of existence. As a result, the diet also began to change, characterized by the increasing consumption of processed foods. Accordingly, ready-made white bread substituted the whole wheat bread that villagers once ate. Tins and cans replaced fresh vegetables and grains, and "junk food", such as biscuits, carbonated drinks and sweets, replaced local snack foods such as raisins, figs, nuts and jams. Powdered milk gradually came to be favoured over breast milk, and instant weaning foods replaced the family meal that children formerly ate as a matter of course. The local diet became high in sugar and refined foods at the expense of roughage.

Only recently has the impact of such dietary changes on health been noted: a rise in dental disease and especially caries among children, 55/ a higher rate of malnutrition among children, associated with the use of milk powder; the concomitant rise in diarrhoeal diseases; and, as observed previously, a generalized rise in diseases such as diabetes, hypertension and heart disease, which are largely associated with the increased intake of sodium, sugar and processed foods. The implications of these behavioural patterns of food consumption for future health-care planning should not be underestimated.

The second factor is the impact of social discrimination on health. In Palestinian society, like that of other developing countries, the consequences and ramifications of the division of labour according to sex is expressed in more than one way. In general, it has meant subjecting women to forms of discrimination in most aspects of economic, political and social life. Male offspring are usually favoured. This bias has expressed itself in terms of health indices.

In virtually every study that includes a breakdown of data by sex, there is an obvious disparity in health status between the sexes in favour of males. Studies of infant mortality repeatedly show a higher rate for girls than for boys, even though, for biological reasons, more boys are expected to die during the first year of life than girls. 56/ Studies of morbidity have shown similar results, with more girls than boys suffering from malnourishment. Attempts to study this phenomenon-linked behaviour reveal that women tend to provide more care for their male children, picking them up more often when they cry, caring more for their cleanliness and well-being, and taking them to the doctor more often when needed. This type of behaviour was found to be pervasive, with mothers usually unaware of their preferential treatment of boys. 57/ At the root of this behaviour there appears to be a widespread social attitude that values male over female offspring, and is perpetuated by the educational, legal and ideological belief systems prevailing in Palestinian culture. A better understanding of these attitudes and their causes is needed when planning for health-care delivery services in the territory.

C. The impact of the uprising on health conditions

The political and social transformations since the uprising have had a profound impact on both health conditions and health services in the West Bank and Gaza Strip. The widespread popular participation in the struggle against the Israeli occupation, coupled with a dramatic rise in the use of physical force by the authorities to quell popular protests, has led to exponential

increases in the number of dead and injured. In the first year of the uprising alone, conservative estimates listed 398 documented deaths and over 20,000 casualties, all sustained as a direct result of army violence. For the second year, 787 deaths and not less than 40,000 injuries were documented. In the third year, estimates rose even higher. Overall, close to 2,000 people have been killed, and more than 80,000 have been injured since the beginning of the uprising (up to 1991). The majority of those killed, injured and disabled were between the ages of 15 and 25 years. In addition, the authorities have denied and continue to deny people their most basic human right of access to medical care: the wounded were mistreated; vehicles transporting the wounded were obstructed; medical personnel were assaulted as they delivered life-saving services to the injured; health facilities were raided by the army; and the wounded were arrested in hospitals, and maltreated in Israeli hospitals. 58/

The vast increase in the scale of injuries necessitated a swift and effective response from the Palestinian medical and health-care system. The governmental hospital system, overwhelmed by events, and having suffered considerable neglect under the administration of the military authorities, was incapable of an effective response. The task, therefore, fell on the Palestinian medical and health-care sector, as well as that of UNRWA, to attempt to respond adequately to the pressing needs.

At first the events of the uprising were dislocating. The health-care sector as a whole was unprepared for this scale of injury; medical care providers lacked experience in wartime trauma medicine, and there was no room for the injured in Palestinian health establishments, which also lacked medication and equipment. Moreover, the military authorities took additional measures to limit further the capacity of the governmental health services system to provide medical care under such conditions. Thus, the already deficient governmental health budget was cut; plans were made to reduce the health services staff; the fees charged for health care were raised, and patient transfer to Israeli hospitals was severely curtailed.

Yet, despite what appeared to be insurmountable problems, the system was adapted. All three health sectors (governmental, private, UNRWA) responded collectively to treat the injured. This wide-ranging participation, although varying in degree among sectors, reflected the consequences of deep-rooted Israeli policies that resulted in the alienation of all sectors of Palestinian society. Consequently, even the government-controlled sector participated in the relief campaign, rebelling against some of the orders imposed by the authorities. Nevertheless, and despite these attempts, the three sectors combined are still unable to meet aggregate needs. Much remains to be done in the area of emergency and wartime medicine, and the rehabilitation of the wounded.

D. The impact of the 1990/1991 Gulf war on Palestinian health conditions

During the 1990-1991 Gulf war crisis, health conditions and access to health services reached their lowest point ever. The entire population of the West Bank and Gaza Strip was placed under a strict 24-hour curfew for almost 45 days during the Gulf war, and after. This restriction severely limited the access of the population to health and medical care facilities, and resulted in several unnecessary deaths. Furthermore, wage workers, who formed the bulk

of the labour force, were suddenly unable to earn income. Although the curfew was lifted for several hours every few days so that people could buy provisions, household heads no longer had the financial resources to purchase what their families needed, leading in turn to serious shortages of food, medicine and other items.

Restrictions on movement continued until mid-1991 with new ones imposed subsequently. West Bankers were not allowed to enter Jerusalem without obtaining a permit from the Israeli authorities, at a time when Jerusalem continued to be the main financial and service centre for much of the territory. Such services include, among others, crucial hospital and diagnostic facilities. West Bankers and Gazans were unable to "cross" into each other's territory without a permit, exacerbating the problem of patient referral and information exchange between the two areas. Worker movement to Israel continued to be severely restricted, compounding the problem of unemployment. In addition, it is estimated that up to 50,000 59/ people returned from the Gulf to live with families in the West Bank and Gaza Strip, adding to the unemployment problem and in need of a variety of basic services. These factors, combined with the reduction of remittance money that members of families working in the Gulf formerly sent to their relatives, created a serious shortage of household cash and increased the dependence on the Palestinian health services structure for subsidized or free health-care services. The financial strife afflicting the territory coupled with rising unemployment is likely to set the stage for an additional rise in infant mortality, and exacerbate already deteriorating health conditions.

E. International assistance to the Palestinian health sector until 1991

In the occupied territory, the absence of a national authority has complicated the role and function of international assistance by adding unusual dimensions to an existing situation of underdevelopment. During the years of occupation especially, and because of the fact that the Israeli authorities have not pursued the development of an appropriate health-care delivery system, Palestinians have had sometimes to rely heavily on international assistance. In most countries of the world, the need to subsidize health and educational schemes is acknowledged, especially with regard to the needs of the deprived and those who need health care most, but lack the resources to obtain it. Often, provision is facilitated by governmental and fiscal structures that partially cover the costs of health care for the poorest and most deprived sectors of the population. In developing countries, where governments are unable to raise domestically the finances that are needed to pay for health services, international assistance plays an important role in health-care delivery, and in the provision of basic educational services related to health. In the case of the occupied territory, Palestinians must rely more heavily on international assistance to operate a basic health-care delivery system, which, inter alia, increases their dependence and vulnerability.

1. Multilateral and bilateral support

As of 1991, several international (non-Arab) institutions were providing sizeable amounts of funds in the form of development assistance to the health sector locally. A major funder is the United Nations Relief Works Agency (UNRWA), with a health budget of about $15 million yearly; an additional

$2 to 3 million yearly was specifically allocated by 1991 for emergency purposes. The European Economic Community (EEC) has provided $6 million yearly. The World Health Organization (WHO) approved a budget of about $5 million. The United Nations Development Programme (UNDP) and the United Nations Children's Fund (UNICEF) together have allocated $1 to 2 million to the health sector. As for the United States Agency for International Development (USAID), working through local agencies it has provided, on average, $2 to 3 million for the health sector out of a total budget of $15 million for all sectors.

In addition to these major funders, Sweden, the United Kingdom, Norway, and Canada are important bilateral sources of aid to the Palestinian health sector. While it is impossible to estimate exactly how much these sources allocate to health, the extent of assistance in the health sector probably does not exceed $5 million annually. Further assistance comes from smaller international aid agencies, such as NOVIB, OXFAM, Christian Aid, and others; these contribute an additional $1 million annually. It is estimated that at least an amount of $40 million is spent yearly on the health sector, involving both private and governmental health systems (i.e., excluding UNRWA), with an average annual per capita expenditure on health of US$ 20 to 25. In addition to the above sources, the balance of expenditure on health in the occupied territory has been covered by the Israeli Civil Administration, Jordanian, Palestinian and Arab aid sources.

2. Problems of development aid

While for quite a few years international development assistance has helped to provide for Palestinian infrastructure, including that relating to the health sector, and this has been highly appreciated, the health sector nevertheless continues to present local policy makers and planners with various problems.

One problem encountered is that a sizeable number of aid agencies prefer to support only infrastructural costs. For certain areas of assistance, such as business, industry, and housing this works rather well since what is often needed is "seed money", or money for renovations and technical advancement. For sectors such as education and health, infrastructural support without essential assistance with operating costs, presents problems in terms of project continuity. In the case of education and health, the population often cannot completely cover the costs of these services. This is particularly true of deprived and disadvantaged social groups. However, continued infrastructural build-up often means an additional rise in operating budgets; renovation and improvement almost always carry extra costs. Even the development of human resources can add to the operating costs of health services, for unless specialized and trained personnel are provided with an added budget to implement new schemes, the value of training becomes questionable. This presents a dilemma: on the one hand, the Palestinian people need the investment in infrastructure, but on the other hand they cannot always support financially the consequences of such improvements. This has sometimes meant that projects are initiated and then closed down, or turned into poor providers of service for lack of operating funds.

Another problem often encountered with development aid is that even if agencies do, in fact, support operating costs, they are usually unwilling to

support operating costs over several continuous years. Yet, once the flow of funds stops, so do the health projects themselves. Alternatively, some projects are sustained, but in a distorted and unacceptably weak form.

A third problem relates to agency policy. A large array of aid agencies currently operates in the area; each has its own policy and its own goals for development assistance. Consequently, Palestinians often find themselves having to tailor their plans to those of the agency, if assistance is to be obtained. The results are sometimes contrary to that desired, since local institutions will sometimes change their policies and plans in order to secure grant money, leaving no room for proper planning and project implementation.

Much can be done to remedy these and other problems. What is needed is greater understanding on the part of international aid institutions of the unusual circumstances under which Palestinians have been living. Allowance must be made for the flexibility that is needed for good planning and project implementation. Infrastructural support, without somehow securing viable operating budgets, can sometimes do more harm than good. Thus, provision for operating costs must be addressed seriously. Furthermore, the need for continuous long-term funding is great if health projects are to yield the desired results. It would be worthwhile for international aid agencies to allow for an element of flexibility regarding the priorities of Palestinians, as defined by Palestinians, and the incorporation of these priorities into the policy of aid agencies working in the territory. The need for the provision of endowment funds to local institutions cannot be disregarded and merits serious consideration. No doubt equally serious challenges face the Palestinian partner in the desired international aid effort. Both the government and non-government/private sectors must devise and demonstrate cohesive and realistic approaches to the sustained development of the health sector.

F. Medication and the local pharmaceutical industry

Since the World Health Organization took the decisive step of establishing an essential drugs programme in 1972, rational use of drugs began gradually to assume a central position in the development of health systems for all countries. 60/ The significance of drugs in the context of health-care systems is related not only to the fact that they have an important bearing on clinical practice, but they also constitute a major recurrent public health expenditure, after salaries. 61/ It is estimated that up to 40 per cent of health-care budgets in developing countries is devoted to procurement of drugs. Yet, ironically, most people do not have access to basic medicine. 62/

1. Structure, scope and market orientation

There are currently 10 pharmaceutical companies operating in the West Bank and Gaza Strip, 9 in the West Bank, and 1 very small company in the Gaza Strip. Table 29 shows the location of each of these companies and the total number of staff employed. As can be seen, the large majority of these companies are located in the Ramallah District, the centre of pharmaceuticals manufacturing in the territory. Together, they employ 477 persons. The first

three companies (table 29) employ approximately 15 per cent of specialized persons; the rest are employed along with semi-skilled and unskilled labourers by the remaining companies.

Eight of the companies are based on a shareholding system and two are owned by individuals. A total of 800 to 900 shares are currently in the market. Traditionally, the company manager in all of the companies offering shares is the owner of the largest number of shares and therefore exercises control over the company. Physicians are allowed to be shareholders, and in fact about 40 physicians hold shares in most of the companies.

2. Production and its capacity 63/

The pharmaceutical companies in the area do not synthesize chemicals. They are principally engaged in pharmaceutical mixing and packaging, which can be rather tedious with many delicate steps involved in the manufacturing process. They import all of the raw materials from abroad, usually through Israeli agents of international companies. All of the companies produce items covering seven classes of drugs: antibiotics, analgesics, multivitamins, cough syrups, antispasmodics, antacids, and antirheumatics. Only the first two companies (table 29) produce hormones, cimetidine, antihypertensives, cardiac drugs, and oral hypoglycemics. They also specialize in particular dosage forms that are difficult to manufacture, such as ampoule forms and effervescent tablets.

Currently, manufacturing companies cover around 70 per cent of local demand. Decisions regarding the introduction of new items into the market are dependent upon informal market research based on the views of prescribers sought by the companies themselves. It is believed that the capacity of production of these companies can easily cover the needs of the West Bank and Gaza Strip. At the moment three million pieces - packs of 16 capsules, 20 tablets or a bottle - are produced yearly by all these companies. However, production is not at full capacity because of market problems. Palestinian manufacturers cannot sell in Israel although Israeli products are readily available in the West Bank and Gaza Strip. The possibilities for locating markets in the Arab world exist, but have been curtailed by political conditions. 64/

3. Quality control, research and development

Quality control has gradually become an important part of the production process in pharmaceutical companies. However, standards vary from company to company, and it appears that only three have succeeded in establishing up-to-par operations. Even so, much can still be done to improve the existing quality. As for research and development, it is a non-existent area in pharmaceutical company operations as synthesis does not take place. In turn, synthesis is difficult to achieve locally not only because of the lack of expertise and infrastructural support, but because of the lack of markets that could sustain the much higher costs of production.

4. Capital and human resources needs

Currently, the most pressing need is to rationalize production and to keep competition among the companies to a minimum, perhaps through

specialization. Additionally, new products need to be introduced to the market such as insulin products, gonadotropic hormones, intravenous solutions, gynaecological products, and new antibiotics. However, this will require added investment, infrastructural support, and the development of specialized manpower. On the whole, pharmaceutical companies need to concentrate on securing loans to improve, expand, and innovate production, and on further developing the manpower working in these institutions.

5. Utilization of medication

The utilization of essential drugs in the occupied territory shares many characteristics with developing countries. Generally speaking, polypharmacy is a dominant problem, because of the use of multiple prescriptions, combination drug use, frequent injections, the unwarranted use of vitamins, and the incorrect use of medication, in line with the general utilization pattern in third world countries. 65/ So far, almost all medication is sold over-the-counter, without a prescription, to whomever seeks it regardless of special considerations, such as age and potentially responsible use. Prescription patterns are equally alarming; antagonistic antibiotics are frequently prescribed in combination, and potentially dangerous drugs are often prescribed for simple ailments (i.e., the use of chloramphenicol to treat the common cold). Often, patients are given medication which is completely useless for the given condition.

Thus, drugs are seen by prescriber and user alike as consumer items, to be bought and sold in a market that lacks almost any form of regulation over either buyer or seller. The lack of regulation is at least partially attributable to the situation of occupation, where Palestinians themselves have no role in promulgating regulations to govern the use of drugs. Accordingly, physicians can and in fact do own a considerable proportion of shares in local pharmaceutical companies, with the risk that prescription medication may be seen and disseminated as a profit-making operation. Pharmacies continue to sell almost all drugs over the counter despite the increasing awareness among health professionals of the dangers of such a practice. The latter have no legal recourse by which to terminate such practices. In all, the situation is one where the use of pharmaceuticals is not only irrational, but out of control. There is an urgent need for the establishment and maintenance of an adequate drug supply for both the provision and extension of health services in the territory. Consequently, rational drug use, including the implementation of a drug formulary system, is a top priority, both as a political and as a public health issue.

Chapter VI

MANAGEMENT OF THE HEALTH SYSTEM

A. The structure of the system, problems of coordination and integration in the absence of an indigenous government authority

The picture which has emerged from the current discussion is one of a disjointed health-care delivery system in which the governmental, Palestinian non-governmental, private and UNRWA subsystems all operate independently, albeit in some instances together. Indeed, it is difficult to see how plans for the further development of the system could be rationalized and rendered more coherent without the necessary infrastructure provided by a national government. It is precisely here where the policy and systematic dimensions of health-care delivery inevitably need to be addressed.

In the first instance, the system suffers from the absence of rules and regulations as well as the inadequacy and ineffectiveness of coordination among the various subsystems. While there have been efforts to create coordinating committees at the central level, such committees have failed, or continue to suffer from the problem of lack of authority, and resources and/or from political and professional factionalism. 66/ The prevalence of this situation is not surprising in view of the fact that for adequate policy formulation, planning and implementation of a health service delivery system at the national level, what is most needed is the presence of an authority structure capable of providing rules and regulations and ensuring their effective implementation. The absence of legislation and guidelines renders the planning and implementation of coherent health programmes next to impossible. Moreover, the skewing of the health-care system in favour of curative and technically oriented medicine further complicates the picture. While this problem exists in many developing countries, conditions of occupation exacerbate the problem in the territory.

This leaves individual institutions to make decisions on their own for further infrastructural development without having the necessary information pertaining to needs and available services. Furthermore, infrastructural development is currently taking place without proper budgeting or assessments. As a result, the call is often for more machines and equipment, and more curative centres in towns and urban centres. While all of this is needed, so, too, is the expansion and consolidation of a proper community and public health-care system that can prevent disease and promote health care as well. In other words, expansion in the curative and super-specialized care system has taken place but somewhat at the expense of public health programmes, and has consequently created imbalances within the system. Much more data need to be generated through field investigations in order to assess the magnitude of this imbalance. An inventory of what is available in relation to needs must be built up and used to address the needs of defined priority groups and target populations. Budgetary allotments for curative, primary and preventive health care need to be considered separately in order to ensure that developments in one strand of medicine do not occur at the expense of others.

Existing technical facilities also require further development, but in an appropriate and cost-effective direction. Duplication should be avoided, as should unnecessary restrictions on the building of high-quality specialized

services. Supporting services and staff must be ensured at the same time as high technology equipment is procured. Care must also be taken not to subsidize equipment procurement at the expense of human resources development which is fundamental to a viable health-care delivery system.

One of the most important problems that the Palestinian health-care system faces today, both curative and preventive, is the problem of adequate management. There is little awareness of the need to manage properly health services, or of the decisive impact of management on the whole operation. As Palestinian institutions expand with plans to cover a higher proportion of local demand, the need for skilled management often escapes attention. Many health service delivery entities, including major hospitals in the area, are currently bogged down by administrative problems instead of concentrating on technical questions. Examples include: the monumental problem of processing and storing medical records; the centralized and regulated procurement of equipment, medication, and supplies; the management of personnel; the problems of maintaining 24-hour services and coverage; and manpower planning for the expansion of services.

B. Human resources development

1. Physicians

Human resources development is clearly at the top of the priority list for developing the Palestinian health-care delivery system. First, there is a need to train more physicians in order to increase the physician-to-population ratio from the current 11 physicians per 10,000 people in the West Bank and 10 physicians per 10,000 people in the Gaza Strip to at least 20 physicians or more per 10,000 people. With a stable population number, there is a need to double at least the number of physicians working in the country in order to allow for the effective implementation of improvements in the health-care system as a whole. This is a rather conservative estimate of immediate needs in view of the fact that the population has been growing steadily in the recent past, especially in the Gaza Strip. There is also a need to train physicians more rigorously as well. It has become clear that Palestinians must locate alternative affordable sources of medical training abroad. There is also need for more appropriate training, which raises the question of developing plans to establish a local medical school capitalizing on local resources. Secondly, there is a need to increase the number of specialized physicians in both the West Bank and Gaza Strip in virtually all specializations, especially those related to public and community health. This includes: public health, community health, infectious diseases, epidemiology, maternal and child health, radiology, pathology, internal medicine, oncology, ophthalmology, paediatrics, gynaecology, and health statistics. Thirdly, and perhaps most important, a variety of in-service training and continuing education courses should be initiated.

2. Nurses, village health workers, paramedical and managerial staff

Based on data presented above, top priority must be accorded to upgrading existing nursing and paramedical staff, through in-service training courses, continuing education and further professional training and specialization. Virtually all strands and specialties are needed. Care must be taken, however, to ensure that curative, emergency and super-specialty needs, such as

intensive care, coronary care, medical/surgical and orthopaedics, do not overshadow basic needs in areas of public and community health. Likewise, the training and support of village health workers in standard procedures of health-care delivery is important, as is the need to create a larger stratum of health professionals who are both managers and planners able to operate an effective health-care delivery system.

3. Achievements

Despite the many problems faced, Palestinians have succeeded in building somewhat independent health-care infrastructure. In the 1970s and 1980s, the Palestinian private sector created a non-governmental community-oriented set-up to help the Palestinian community absorb the jolts of the uprising. These preparations are also significant in terms of the anticipated political changes, whether at the level of autonomy or of future sovereignty. Indeed, it appears that the health sector is among the most developed of Palestinian economic and social sectors. Given the considerable political constraints imposed on the development of the Palestinian health-care system, this achievement can be considered formidable.

Another important point is that, despite the continued biomedical orientation of the health-care sector, the uneven distribution of resources, and the absence of some services altogether, Palestinians working in the health sector in the 1980s emerged with an acute awareness of the need for a strategy based on a scientific assessment of priorities and requirements, keeping in mind the limitations of the biomedical model and the possibility of testing alternative models for health-care delivery. Clearly, the experience of the 1980s was rich in modelling, adaptation and evaluation. Such a mix between practice and consciousness facilitates the building of a viable future health-care delivery system, with increased potential for fulfilling people’s health needs.

Chapter VII

CONCLUSIONS AND RECOMMENDATIONS

As the future of the Palestinian people and their homeland is being negotiated, the Palestinians in the occupied territory are, for the most part, looking hopefully, albeit anxiously, to the future. Having endured years of oppression and the denial of basic political and human rights, including the right to a healthy and secure life, Palestinians are beginning to turn their attention to the process of nation-building and to their emergence as a civil society. They anticipate crucial changes ahead, positive and negative, that will affect their lives in critical ways. This is a time of great insecurity and hope.

Many Palestinians realize that history has denied them the experience of thinking and planning on a national level. Yet, their experience during this period should enable them to mobilize their resources and capabilities towards the building up of a free and democratic system that will serve better the growing needs of an emerging society. Palestinians have already established an infrastructure of resistance to military rule through the creation and development of vital institutions. However, they have yet to begin the process of shaping the structures and processes of their society into a unified, effective whole.

In the health sector, there have been significant advances over the years. As noted earlier, the existence and activities of organized movements working for change are, in themselves, a testimonial to such achievements. Nevertheless, the sector is currently in need of further normalization and institutionalization.

Palestinians have maintained that real economic and social development depends upon an end to occupation and to the establishment of a legitimate Palestinian government. In the interim, they are attempting to focus attention on identifying and addressing the major problems that affect the medical and health-care infrastructures and services, and determining the steps necessary to correct the anomalies and to plan for a more adequate national health-care system that meets those needs. In this endeavour emphasis is placed on the areas enumerated below.

A. Primary health care needs

As indicated earlier, on average one clinic serves approximately 3,000 people in the West Bank, and 11,000 people in the Gaza Strip. This inadequate and inequitable distribution of clinics reveals that areas such as the Gaza Strip and the north and south of the West Bank are considerably less served than the centre.

A complicating factor in health-care delivery is the absence of a unified national standard for the number of clinics that should serve a finite number of the population. UNRWA currently provides health-care services using a ratio of one centre per 10,000 persons. However, this appears to be insufficient for the fulfilment of current needs given the high average patient load. A ratio of one comprehensive primary health-care centre serving approximately 5,000 persons seems adequate to meet existing needs. Using this

measure to assess immediate and future demand for services, it can be argued that immediate priorities for the further development of the primary health-care infrastructure are:

1. Assisting primary health-care centres to upgrade the type and quality of their services. This would require concerted efforts to deal with a range of problems including:

(a) Working with local institutions to standardize their system of primary health-care services to include different strands of primary care, without omitting those that respond to the specific needs of the community. Other more specialized programmes could also be considered depending on community needs.

(b) Working with local institutions to upgrade the professional and general education level of the existing staff through the institutionalization of in-service training programmes, continuing education, and special upgrading programmes to allow existing staff to operate adequately under the newly developed system.

(c) Working with local institutions to establish and maintain an adequate system of supervision, especially at the level of middle management category. Certain primary care programmes could be operated centrally in a cost-effective and manageable way, such as the development of a rational drug list for the institution, central drug and equipment procurement, training of various staff and continuing education, etc. Other programmes could only be supervised and managed in a decentralized way, preferably regionally. Central coordinating structures could ensure flexible information exchange and an element of uniformity within the system.

2. Addressing the problem of uneven development and regional variations in the provision of primary health-care services. While the upgrading of existing services remains a top priority, it is equally important to also introduce new projects in areas where the primary health-care services/population ratio is low, especially the Gaza Strip.

3. Introducing a comprehensive system for strategy formulation, planning, monitoring, evaluation and up-dating of primary health-care services. At the moment, very few primary health-care projects have been subjected to systematic treatment. Many were initiated without any underlying strategy, institutional policy or vision of the future. Many are neither monitored nor evaluated in terms of their impact. At the very least, such a process could first be initiated at the level of individual institutions, while moving toward's a national level.

4. Assisting primary health-care centres to begin gradually introducing new programmes geared towards the fulfilment of future health needs, consistent with expected socio-economic and lifestyle changes and trends. Of particular importance are the introduction of new programmes including geriatric care, disability care at the community level (e.g. community-based rehabilitation projects) and women's health, among others. The latter requires special attention for a variety of reasons. First, it is usually defined almost exclusively as reproductive health when, in fact, women continue to face health problems that go beyond their reproductive role in society, and which

are currently not addressed through the majority of available primary health-care services. Moreover, even the maternal and child health services currently provided require a substantial amount of upgrading, including the incorporation of family planning services. In addition, women are increasingly being incorporated into the job market, and are being exposed to new types of stresses, which may increase their potential for disease, a problem that has not been addressed by the primary health-care system.

Similarly, the area of mental health requires special attention. Years of oppression and suffering experienced by Palestinians in the occupied territory place special burdens on the overall status of mental health. Prisoners and detainees, as well as children and women, require special attention. As the problems of mental health and their impact on physical health are becoming increasingly apparent, every effort must be made to include mental and psychological health services within the primary health-care system.

5. Linking primary health-care services to secondary and tertiary care centres. At the moment, an important problem facing the provision of primary care services is the lack of an adequate network linking primary health care with specialty services and hospitals. Perhaps technical and managerial guidelines and protocols could first be devised at the institutional level in order to guide health-care providers on how, when and where to refer patients for these specialty services.

6. Assisting local primary health-care centres with regard to mobile clinic activities. While permanent health-care facilities within communities remain the foundation of primary health-care services, mobile clinic activities have often been instrumental in assisting communities in partially fulfilling their curative needs. Mobile clinics are especially useful in situations where the establishment of permanent centres is impossible. However, standardization of practice is urgent, especially with regard to diagnosis and medication. Moreover, if properly supervised and monitored, the mobile clinic setting can complement the practical training of incoming health-care professionals, by addressing problems at the community level in an organized educational setting. Perhaps links could be created between these services and vocational education institutions to improve the knowledge and quality of care of the medical and health-care staff.

7. Developing the record-keeping, basic research, and managerial skills of primary health-care centres. For the system to work efficiently and to develop through monitoring and evaluation, it is crucial that the centres keep adequate records of their activities, from individual patient files to overall statistical and qualitative assessments of activities on a yearly basis. Moreover, future development depends in part on the ability of institutions to conduct action-oriented research such as feasibility studies, baseline data collection, etc.

8. Developing an institutional system for the reporting and control of epidemics and infectious diseases. This system should start at the individual institutional level within every primary care centre operating in the territory. It would eventually be linked to a system that could effectively

work at a centralized level to study, assess and control periodic outbreaks of epidemics and infectious diseases, as well as infectious diseases that are endemic to the territory.

B. Secondary and tertiary health-care needs

1. Hospital services

As noted earlier, in both governmental and non-governmental sectors, the current ratio of hospital beds to population shows a clear need to increase the number of beds in order to reach an accepted standard. However, it is equally clear that before this type of upgrading is attempted, every effort must be made to solve the problems of space and management, among others, that hamper the efficient provision of services. Occupancy rates at the main Jerusalem hospital are alarmingly high, reaching 130 per cent for much of the year. One of the staff's major complaints is the lack of adequate space. This problem is common to the majority of non-governmental hospitals.

In response to crisis situations, local hospitals grew and developed under strenuous conditions, reflecting an overall lack of middle and higher level management structures and trained personnel who could ensure the smooth flow of services. When operations are limited, managerial problems are usually containable, but once activities expand in response to crises, management problems can complicate and obstruct service delivery. Overall, immediate needs in this area may be summarized as follows:

(a) There is a need to begin evaluating in detail the services provided by all hospitals in the country, examining both technical and managerial aspects of work. The aim of such an evaluation would be to assess current capabilities and problems as well as plan for the future in an integrated and rational way, including future infrastructural and human resources needs.

(b) Meanwhile, the situation calls for the upgrading of existing medical, paramedical, managerial, and service staff. In-service training and continuing education systems need to be established and maintained in order to ensure the delivery of quality service, and to respond to the growing demands on infrastructural and managerial capacities of hospitals.

(c) Efforts are also needed to assist hospitals in developing their administrative capacities, including their record-keeping systems. This is crucial for: improved patient care, the future development of strategies and plans, and national level coordination and exchange of information. Similarly, a network reporting system for infectious diseases and epidemics could also be institutionalized within these hospitals and eventually linked to a central structure.

(d) Attempts should also be made to link hospital services to primary health-care services, establishing a clearly defined system of two-way referral. At the moment, one of the major complaints of hospital out-patient specialty clinics is that many of the cases they see are time-consuming and could be adequately dealt with at the primary care level if services existed and the quality of programmes was assured, and if a clear linkage system between hospitals and primary care networks existed. Similarly, a system for referring and following up patients discharged from hospitals needs to be

developed using primary care institutions. Likewise, a network/referral system could be established between regional hospitals and those in the central area, gradually working towards separating secondary care along regional lines and tertiary care in the central part of the territory. In this way, an efficient and effective system could be established that would relieve hospitals from their strenuous patient load while guaranteeing patients the needed follow-up within their own regions and communities.

(e) A serious effort is also called for to assist local hospitals in developing protocol systems for therapy, given their absence in the majority of existing services. Standardization of policies, procedures, practices and therapy are crucial elements for the patient, for the training of incoming professionals and for cost-effectiveness.

2. Other infrastructural facilities and services

As noted above, laboratory and diagnostic services, pharmacies and dental care services, among others, fall mostly within the private sector. Again, the major problem is the absence of a legitimate authority that can set guidelines, legislation, standards and procedures. When coupled with a lack of any type of regulating authority, the provision of health services for profit motives alone can lead to undesirable results. A classic case in point is the problem of uncontrolled manufacturing and distribution of pharmaceuticals, as discussed earlier. Similarly, laboratories conduct clinical tests with minimal supervision, little regard for standards of quality, and charge exorbitant prices.

3. Tertiary care

Although the defining line between secondary and tertiary care is unclear, there is a need to develop the system further to include one tertiary care centre per one million people - i.e. one in the West Bank and one in the Gaza Strip. Already, the trend at Al-Maqassed Hospital is towards tertiary care specialization, leaving regional hospitals to function as secondary care centres. Such a tertiary care centre should provide treatment of rare and specialized cases, promote medical research and provide training facilities for medical and para-medical personnel and health workers. Such training infrastructure could be linked to universities in the region in order to combine theoretical and practical training into one medical and health education system.

4. Public health services and the rehabilitation of specific groups

(a) The Disabled. It is currently estimated that at least 60,000 disabled persons live in the West Bank and Gaza Strip, of whom not more than 10 per cent benefit from available services. As noted earlier, the majority of these services are of the institutional and long-term shelter variety. While institutional care is an important element of disability rehabilitation care, it needs to operate within the framework of an overall system geared primarily towards the social integration of the disabled into their communities. Community-based rehabilitation (CBR) is the cornerstone of building a rehabilitation system. Rehabilitation is a philosophy that must include all elements of society. For example:

- Instituting laws to ensure that all enterprises include at least 3 per cent handicapped persons among employees;

- Construction laws covering the installation of facilities accessible to the handicapped such as toilets, ramps, lifts, etc.;

- Facilitating transport and communication for the handicapped;

- Consideration of the handicapped in the media, and elsewhere.

One important achievement in this area is the formation of the Central National Committee for Rehabilitation (CNCR) in the West Bank and Gaza Strip which coordinates implementation and sets guidelines for model-building in the area of rehabilitation through seminars and other consultation programmes. At the moment, the Committee is working on the final draft of its rehabilitation policy.

In line with the guidelines developed by the CNCR, and according to the information outlined earlier, the immediate needs in this area may be identified as follows:

(i) Support coordination among institutions serving the disabled, in order to avert duplication of services, but gear services towards the actual needs of the disabled, and assist in the development of national policy and programmes reaching all disabled people.

(ii) Support the development and dissemination of community rehabilitation projects in accordance with World Health Organization (WHO) guidelines. The WHO model is cost-effective, potentially sustainable by the local population and the future Palestinian government, and is also humane.

(iii) Encourage the establishment of a referral and information exchange system between CBR programmes and rehabilitation institutions with the development of a two-way communication system to link communities with service institutions.

(iv) Concentrate efforts to encourage the establishment of CBR projects within the context of primary health care, and as an integral part of the primary health-care structure. Similarly, the establishment of referral and information exchange linkages between CBR and the educational, social service and employment sectors could be encouraged. This is of the utmost importance for the proper integration of the disabled in schools, as well as provision of social assistance and employment opportunities.

(v) Upgrade the technical and managerial capacities of existing health institutions. The services of these institutions are in urgent need of evaluation while the proficiency level of existing staff must be improved through intensive training

and continuing education. It is equally important to assist in re-orienting existing institutions towards the CBR model.

(vi) Assist in establishing and maintaining day care centres for the severely disabled, with clear linkages to CBR programmes and other social and educational services.

(vii) Assist in the establishment of recreation and entertainment facilities for the disabled.

(viii) Assist in raising public awareness of the needs and aspirations of the disabled since social stigma - especially among disabled women - continues to be a major factor inhibiting the social integration of this sector into the society.

(ix) Assist the disabled to organize themselves by increasing their level of awareness, and by helping them become a lobby group for their own improvement.

(b) The Elderly. The territory's elderly population currently numbers about 100,000; judging by present health patterns, they will almost certainly continue to increase over the next few years. Many people in this sector (especially those with small or impoverished extended families) will require assistance in the areas of health, rehabilitation and social services. Present services available to older people in the territory are limited to a very few homes for the aged, which provide generally low-quality care.

At the same time, social changes mean that more and more women are entering the job market. Expanding work roles increases the burden on women, and eventually their level of care and energy in dealing with the health and social problems of the aged and disabled decreases. It is therefore important to prepare for a future in which an increasingly ageing population is likely to add to new demands on the health-care system.

The main health problems associated with the elderly are chronic diseases, notably diabetes, hypertension, heart disease, rheumatic diseases and disability. Dealing with them requires the establishment of a new system of health care incorporating geriatric needs which alas has not yet emerged. Needs can be defined at two levels:

(i) With regard to existing health services, assistance is required to include new programmes within the primary health-care sector; these must be geared towards the geriatric population. This entails the following:

* The collection of a baseline data/information system, either through surveys, clinic records or both, to identify the major health problems actually faced by the elderly;

* The systematic formulation of plans to integrate the different strands of geriatric care into existing health

projects at the primary level, and linking them through a referral system to secondary and tertiary care; and,

* The training of existing medical, paramedical and other health professional staff in basic geriatric care through special courses and programmes.

(ii) Regarding the establishment of new types of programmes, the possibility of linking these primary care services to social, recreation, and entertainment services at the community and home level should be explored.

(iii) At the institutional level, the existing facilities for the aged, human resources and activities are all in need of improvement.

C. Health personnel and educational needs

1. Physicians and paramedical staff, including nurses

(a) Primary health care

In accordance with the requirements outlined above, and based on the idea of shifting existing health centres towards holistic and comprehensive primary health-care service provision, including the introduction of new programmes to address current and future requirements, immediate training needs in this sector may be identified as follows:

i. Physicians

- Generalized in-service training and upgrading of physicians' skills and knowledge of the principles and practice of primary care is required. Formal medical education is not sufficient for adequate practice at this level, especially in a society where medical students have been educated under many different systems. Such a training programme should include both team and community approaches to work, stressing the importance of each method and the role of the village health workers and other newly developed human resources.

- Assist in the specialized training of physicians, mostly through short courses rather than degree-length programmes, especially in maternal and child health, family planning service provision, women's health, mental health, geriatric care, disability care, and the care of diabetic and hypertension patients.

- It would also be valuable to train physicians in the basic principles of management, record-keeping and communication. In most primary care situations, physicians are responsible for managing primary care teams. It is therefore crucial to introduce in-service training, upgrading of skills and continuing education, so that the knowledge and attitudes of physicians will conform to the team approach to primary care, incorporating the role of village health workers.

ii. Nurses

Nurses play as important a role in primary care as doctors, village health workers, and other human resources. There should be supplemental training of nurses therefore as for doctors. Moreover, nurses could be educated to appreciate the role of different kinds of health-care workers taking a team approach. For example, the nursing staff can play a larger part in the clinic and within the context of curative care and clinic-based preventive activities, such as prenatal care, post-natal care, well-baby clinics, and vaccination programmes.

iii. Village health workers and rehabilitation workers

This is a newly emerging category of health-care worker instrumental in linking health services to communities. Most practitioners are women and come from the communities in which the projects to which they are assigned operate. As such, they are the anchors holding service to local needs and aspirations. Development of this category of health personnel has not only strengthened ties with the community, but has also proved to be cost-effective, all of which enhances the value of health workers. Further efforts in this sphere could focus on:

- The provision of clearly formulated, well-planned training in village health work, in accordance with the principles of primary care defined by the World Health Organization.

- The introduction of specializations once village health workers gain knowledge and experience in the field. This applies to training workers especially in geriatric care, mental health, family planning, basic clinical laboratory techniques, and pharmacy management, among other fields.

- The provision of specially designed training for individuals who have no previous training as professionals in health care. Local experience has shown that when projects employ professionals to function as village health workers, job satisfaction and esteem remains low, and the attrition rate is very high. Every effort is required to assist institutions in training and employing people who are the most likely to stay in their jobs for an extended period. Furthermore, training of these categories requires special attention to confidence-building, communication skills and other prerequisites of effective functioning in a team setting.

(b) Secondary and tertiary care

i. Physicians

- As with primary care, there is an urgent need to introduce in-service training for all physicians entering hospital practice; likewise the gradual introduction of institutional standards and protocols is essential. Similarly, continuing education programmes

are of major importance as they can help to ensure long-term quality care. Mandatory training of this type should be encouraged for everyone.

- It is important to note that the medical system within hospitals currently operates in the English language, yet the majority of incoming physicians do not have a fluent command of the language. Thus, much of their first year or two in practice is spent labouring over language problems instead of medical matters. This can only delay in-service training and impede the development of good-quality care. For this reason, medical English language training should be incorporated into in-service training schemes to facilitate the process of adjustment, and to encourage good medical practice.

- There is also a need to develop a specialization system within hospitals to incorporate those specialties still lacking, while minimizing duplication in specific fields. Certain fields of specialization could be part of all hospitals, regional or central (e.g. gynaecology/obstetrics, paediatrics, internal medicine and surgery). However, other areas can be a specialty of selected hospitals, such as oncology/haematology, and neurosurgery. Thus, at this stage in the process, it is recommended that hospitals be upgraded through in-service and specialty training of physicians in order to achieve an acceptable level of quality care in the basic medical fields. Gradually, and as new departments are introduced, new specialty training can be supported.

ii. Nurses

- Unlike physicians, most nurses working in the hospitals have been trained locally. However, because of differences in training approaches, nurses also require in-service training to adapt their theoretical knowledge to a hospital’s specific systems and procedures. There is a pressing need to reassess nursing school curricula for their suitability to the local setting and needs. It would be worthwhile to assist nursing schools in re-orienting their training towards the community-based and applied training approach to nursing education.

- There are few specialized nurses in the occupied territory. A great deal could be done to encourage nurses to pursue specializations, especially in medical/surgical, obstetrics/gynaecology, paediatric, and other basic specialties needed by all hospitals.

- As with village health workers, nurses would also benefit by confidence-building and communications training. While nursing is more established as a professional field in health-care services, the status of nurses needs to be legitimized. It is important that nurses perceive themselves as full members of a team and that doctors, administrators, and other staff working within the hospital perceive them as such rather than as merely aides to

physicians. Such a problem can be solved over time with the increasing specialization of nurses, coupled with special training in communications and confidence-building.

2. Other technical staff

There is a growing need to assist local hospitals as well as primary health-care institutions in developing criteria, protocols and guidelines for operating primary health-care centres and hospitals. Of particular importance are such issues as rational drug use, the building of hospital and primary health care restricted formularies, infectious disease control, epidemiological units, record-keeping and research. While quality-control and standardization may be difficult to achieve at the national level all at once, it may be realizable at the institutional level and might prove to be a promising first step.

In addition, laboratory technicians, pharmacists and other existing staff also need in-service training and continuing education geared towards defined standards and assurances of quality control. Furthermore, new types of technicians also need training, particularly in the areas of medical engineering, equipment repair and maintenance, and medical record-keeping.

3. Administrative, managerial and general service staff

This is an area requiring major assistance in training. As stated above, mid-level technical and managerial supervision, and mid- and upper-level general management remain some of the weakest areas of primary and secondary health-care service provision. It is apparent that general management systems must be developed at the institutional level in the primary care sector. In this regard, needs include the following:

(a) The training of physicians, nurses and village health workers in the technical supervision of their units. Such training could include basic management skills, communication skills, personnel relations, record-keeping, report writing, basic statistics and budgeting. It is important to emphasize that quality mid-level managers should continue to work in their field of specialization, and assume certain managerial responsibilities for their team.

(b) The training of another category of higher level team managers of health services. Such a team could be composed of doctors, nurses and other health professionals in addition to administrative staff. This category could be fruitfully trained in such areas as policy formulation, planning - keeping in mind institutional, regional and national priorities - budgeting, fund-raising, and other general management skills such as communications and personnel relations.

(c) Provision of technical assistance to individual institutions for establishing and developing a workable administrative system capable of changing and developing in line with emerging needs. However, specific assessments of existing administrative systems in each locality need to be made before further development and training can begin. Such assessment is

necessary to create an environment where newly-trained staff could implement the changes needed. Such training to date has virtually been wasted since newly-trained staff were unable to effect changes because of inadequate or non-existent administrative structures.

Specific training of administrative staff in health institutions should focus on the following areas: basic managerial/administrative skills for all section leaders in all institutions, personnel management, procurement and purchasing, general services (e.g. kitchen and cleaning units), accounting, budgeting and finance, public relations and fund-raising, planning units, computer and record-keeping services, blood bank and laboratory services, and social services units.

Hospitals, more than other types of institutions, need specific training for their general services staff, including janitorial, kitchen, and other workers. Standardization is also important; a well-administered and managed system needs to be established as mid- and upper-level managers and administrators are being trained.

D. Public health personnel and the role of Palestinian universities and human resources development centres

One of the main requirements for the effective upgrading and development of the health-care infrastructure is the development of its human resources, along the lines mentioned. In the occupied territory, training public health personnel is now vital since the political changes in eastern Europe have dramatically reduced the number of scholarships and admissions of Palestinians to institutions in these countries. This has serious ramifications for future medical education and specialization among Palestinian physicians.

The opportunities for training in Europe, the United States and Canada are limited owing to financial constraints and high admission qualifications. However, combined with the impact of the peace process on the attitudes and aspirations of local universities, training centres and medical establishments, a variety of new programmes and training centres aimed at fulfilling present needs have been initiated and more are likely to emerge from the changing situation. The institutions involved require help at three levels where external assistance could make a substantial contribution:

1. Policy formulation and planning for the training of health personnel based on an understanding of the current reality and future needs

Jerusalem University has taken concrete steps towards establishing a board for a new medical school, and devising tentative plans for its operation. It is unclear what kinds of training are envisaged and when it will commence. At this stage a number of important questions should be systematically reviewed and answered:

(a) Is the current educational infrastructure capable of supporting and sustaining high-level education? What type of human resources exist in the country providing good quality pre-medical education, medical theoretical

education, and internships? What kind of practical training or clerkships are needed by medical students? Where would they take place? Are current health services, hospitals and primary care centres equipped to train medical students?

(b) What type of medical school is envisaged for Palestine? What approach is to be taken? Is there an immediate need for a biomedical high-technology orientation, or is the community-oriented approach more appropriate for a medical school curriculum? Is it necessary to have a combination of both?

(c) What are the possibilities of coordinating such programmes with educational institutions in neighbouring countries, such as Jordan, Egypt, and others? What "training arrangements" can be worked out with existing institutions in these and other countries?

Such questions are fundamental and the answers are needed in order to ensure that future training will in fact contribute to overall better health in the territory.

2. Coordination and linkages among the various universities and training centres

The threat of duplicating training services and the resulting waste of resources and effort is evident. More than one local university is currently attempting to draw up plans for medical education. Different training centres attached to universities and non-governmental organizations are being established to serve the primary care level, while different resource centres are being set up to implement future training plans. This type of fragmentation and competition complicates rational planning for the overall benefit of society. Consequently, every effort is needed to encourage universities and training centres systematically to review plans and projects in the context of national needs, and with a view to devising a logical division of labour among training institutions and universities, including the possibilities of cooperation/affiliation with similar institutions abroad. In this regard, the Council for Higher Education could serve as a coordinating body.

3. Continuity and operating budgets

A system of higher education is already in place in the West Bank and Gaza Strip; in that system a substantial proportion of the costs of educating students is subsidized by the institutions themselves. This is particularly true of universities. Additional training schemes, especially those for medical schools, will require a substantial investment in infrastructure, and increased levels of funding, since institutions will require stable operating budgets far higher than those previously available. It is crucial that the continuity of funding be assured before commencing the implementation of plans for the establishment of training centres.

There is an obvious need also to train public health personnel other than physicians. However, the system is beset by a lack of clarity in formulation

of educational policy and planning. Competition and lack of coordination among different training institutions is an additional problem. Here, too, national bodies are needed to address implementation concerns, promote information exchange, specialization and cooperation.

Finally, the introduction of specific training programmes needs to be considered at the university level and linked to the public health sector. Its main goal should be to train clinical psychologists, counsellors, medical and public health social workers, medical technicians, medical engineers, paramedics and emergency medicine paraprofessionals, as well as specialists in medical records.

E. Mobilization of efforts in areas of direct relevance to the health sector

In addition to the measures outlined above, attention also needs to be focused on a number of other factors that have strong bearing on the status and performance of the public health sector. Some of these are briefly highlighted below:

1. Income generation and employment

Health and disease are to a large extent socially constructed. They are affected not only by the provision of health services, but also by income levels and quality of life. Therefore, one of the most effective ways to improve the health of a population is through the eradication of poverty, and the generation of employment and income. Every effort needs to be made in the area of employment and income generation to enable the Palestinian people at all levels to enjoy a better standard of living.

2. General infrastructure and sanitation

Improvements in health conditions are directly linked to better infrastructure and sanitation: the installation of piped water and electricity supplies, the development of sewage and refuse disposal systems, the construction of road and transport networks, and the improvement of housing. These are all necessary prerequisites for ensuring better health conditions in the society.

3. International assistance

It is strongly recommended that international aid agencies seriously consider the Palestinian setting as exceptional, and join in supporting the development of the health-care system in all areas outlined above. The provision of operating budgets is important at this juncture in order to maintain existing services and contribute to their long-term development. This should be combined with technical assistance in all areas of public health, with a view to meeting the growing technical and material needs.

4. Focus on priority and disadvantaged groups

As has been noted, future developments in the health-care services system must focus on the health requirements of those identified as high priority and disadvantaged groups: women, children, the elderly, the disabled and people

living in peripheral or rural areas. These categories of the population are often neglected and they lack the social, economic, and political bases necessary to make demands on the health-care system despite the fact that they are biologically and socially at higher risk of disease and death than the rest. If the right to good health is a universal right, then these groups deserve to be among the main beneficiaries of future health activities.

Notes

1/ For further information regarding this problem see R. Giacaman, **Life and health in three Palestinian villages**, London: Ithaca Press, 1988.

2/ Owen, R. (ed), **Studies in the economic and social history of Palestine in the nineteenth and twentieth century**, Macmillan, London, 1982, p. 2.

3/ Hill, A., "The Palestinian Population of the Middle East", **Population and Development Review**, Vol. 9, No. 2, June 1983, p. 298.

4/ Graham-Brown, S., "The political economy of Jabal Nablus, 1920-48", in Owen, op. cit., pp. 88-176.

5/ Hill, "The Palestinian ...", op. cit., p. 298.

6/ See, for example, Paul, J., "Medicine and Imperialism", in Ehrenreich, J. (ed), **The cultural crisis of modern medicine**, Monthly Review, New York, 1978, pp. 271-281.

7/ Owen, R., (ed), "Studies in ...", op. cit.

8/ The traditional medical system that prevailed and that remains the practice today, albeit in a modified form, has its roots in Arabic medicine, like most indigenous medical systems in the Middle East. For further information, see Morsy, S., "Towards a Political Economy of Health: A Critical Note on the Medical Anthropology of the Middle East", **Social Science and Medicine**, Vol. 15B, 1981, pp. 159-163.

9/ Pridham, B. R., (ed) **Economy, society and culture in contemporary Yemen**, Croom Helm, Kent, 1985, p. 170.

10/ See Morsy, S., "Towards a Political Economy ...", op. cit.

11/ See Winthrobe, M. et al. (ed), **Harrison's principles of internal medicine**, 7th edition, McGraw-Hill, 1974, Doyal, L., **The political economy of health**, Pluto, London, 1983, pp. 27-36 and Beneson, A. S., (ed), **Control of communicable diseases in man**, American Public Health Association, New York, 1981.

12/ Hill, "The Palestinian Population ...", op. cit, p. 88.

13/ Sabatello, Eitan, **The population of the administered territories, some demographic trends and implications**, The West Bank Data Base Project, Jerusalem, October, 1983, pp. 15-21. Also see Israel Central Bureau of Statistics, **Multiplicity study of births and deaths in Judea, Samaria and Gaza Strip-North Sinai**, Jerusalem, 1977, pp. 58-62.

14/ The Hashemite Kingdom of Jordan, **Nutrition survey on infants and pre-school children in Jordan (November 1962-October 1963)**, Interdepartmental Committee on Nutrition for National Defense and the Interdepartmental Committee on Nutrition for Jordan, June, 1964.

15/ Sabatello, E., "The Populations of the ...", op. cit., p. 14.

16/ Information gathered through interviews with health professionals who worked within this system in the 1950s and 1960s.

17/ It is usually held that children are the barometer of overall health and development. In the absence of explicit and reliable health data, researchers often resort to examining the health conditions of children then generalize their findings to the whole population. In the absence of data pertaining specifically to the West Bank and Gaza Strip, the author, relying upon infant mortality data and clinical information gathered from physicians and nurses working in the field at the time, concluded that the malnutrition rate in the areas was probably very high, given the prevalence of both Kwashiorkor and marasmus, both normally rare today.

18/ See Katbeh, Samir, **The status of health services in the West Bank**, Jordan Medical Council, 1977 (in Arabic). The study deals with the rise in infant mortality rates in the area, in addition to a discussion of deteriorating services in West Bank hospitals.

19/ Katbeh, S., "The Status ...", op. cit., Puyet, J. J., **Infant mortality studies conducted among selected refugee camp communities in the Near East**, Vienna, United Nations Relief and Works Agency for Palestinian Refugees in the Near East, 1979 and Giacaman, R., "Disturbing Distortions, A response to the Israeli military report on health and health services in Judea and Samaria", **Revue d'etudes Palestiniennes**, No. 12, Summer, 1984 (in French).

20/ Schmelz, U. O. et al., **Multiplicity study of births and deaths in Judea, Samaria and Gaza Strip - North Sinai**, Technical Publications Series No. 44, Israel CBS, Jerusalem, 1977.

21/ See Tamari, S. and Giacaman, R., **The social impact of the introduction of drip irrigation techniques in a Palestinian peasant community in the Jordan Valley**, Birzeit University, Birzeit, 1980, where a clear pattern of infant mortality reduction over the years was noted.

22/ For further information, see Aruri, N., (ed), **Occupation: Israel over Palestine**, Zed Press, London, 1984.

23/ Policy Research Incorporated, **Health status and health services in the West Bank and Gaza Strip**, American Near East Refugee Aid (ANERA), Washington D.C. and Jerusalem, 1989, p. 11.

24/ There is serious under-reporting of these cases, estimated to be at least 50 per cent. See Policy Research Inc., "Health status ...", op. cit. pp. 12-13. Under-reporting is believed to be owing to inadequate coverage of health services, leading to incomplete statistical collection, and owing to the quality of surveillance.

25/ UNRWA, **Health conditions of the Arab population in the occupied territories, including Palestine**, Geneva, World Health Organization, 1989; c.f. table 5 in Policy Research, Inc., "Health status ...", op. cit. p. 12.

26/ These figures are underestimates and represent only those cases reported to the Israeli Military government, and those that have appeared in the authorities' yearly report on health conditions and services in the area.

27/ These data have been retrieved from the records of the Union of Palestinian Medical Relief Committees for 1989. While these figures are clearly not representative of the precise disease picture in the area, they are prototypical of the diseases observed at general clinics in the West Bank and Gaza Strip.

28/ Field investigations require permits from the Israeli military, which have been invariably denied. Even the request by a United States Aid for International Development (USAID) funded agency, AMIDEAST, to conduct a national health survey in the area in 1983 was denied.

29/ Jabra, A., **Nutrition survey among Palestinian refugees in Jordan, West Bank and Gaza**, UNRWA, 1984.

30/ Tamari, S., and Giacaman, R., "The social impact ...", op. cit.

31/ Giacaman, R., **Life and health in three Palestinian villages**, Ithaca Press, London, 1988.

32/ Abu Amara, I. et al., **Diarrheal disease in breast-fed and bottle-fed infants in the southern Gaza Strip**, paper presented to the 13th World Congress of the Israeli Medical Association, 1984; Kasbari, S. and Condie, A., **Intestinal parasitic infection of refugee children in selected West Bank localities**, Birzeit University Community Health Unit, Birzeit, 1986; Smith., C., **Statistical report: disease diagnoses at Birzeit women's charitable society during one year: 1 October 1984 to 30 September, 1985**, Birzeit University Community Health Unit, Birzeit, 1986, as examples.

33/ Smith, C., "Statistical report ...", op. cit.

34/ Giacaman, R., "Life and Health ...", op. cit.

35/ Tamari, S. and Giacaman, R., "The social impact ...", op. cit.

36/ Such as Kaspari, S. and Condie, A., "Intestinal parasitic ...", op. cit., Kasbari and Condie, **An investigation of intestinal parasitic infection and haemoglobin levels of children in a Birzeit school**, Birzeit University Community Health Unit, Birzeit, 1986; Ali-Shtayeh, M. S. et al., "Prevalence and seasonal fluctuations of intestinal parasitic infections in the Nablus Area, West Bank of Jordan", **Annals of tropical medicine and parasitology**, 83, 1989, pp. 67-69; Jabra, A., "Nutrition survey ...", op. cit., Hmaid, S., **Anemia of pregnancy among refugee women in the Gaza Strip**, M. Sc. thesis, Institute of Child Health, University of London, 1987.

37/ See Tamari and Giacaman, "The Social Impact ...", op. cit., Giacaman, R., "Life and Health ...", op. cit and The Union of Palestinian Medical Relief Committees, "Ain al-Dyuk ...", op. cit.

38/ The State of Israel's Ministry of Health Reports on Health in Judea/Samaria and Gaza for both 1989-1990 and 1990-1991 do not present disease distributions and rates, making it impossible to obtain the necessary data to make conclusive judgements pertaining to exact prevalence and occurrence of specific diseases. See State of Israel, **Health in Judea/Samaria and Gaza**, Jerusalem: Ministry of Health, May 1990 and April 1991. The report of the Director General of UNRWA to the World Health Organization (WHO) in 1991 contained listings of the incidence rates of communicable diseases among refugees in 1990, yet no data was available for chronic diseases such as heart disease, diabetes and hypertension. See the World Health Organization, **Health conditions of the Arab population in the occupied territories, including Palestine, annual report of the Director of Health, UNRWA**, 1990, (A44/inf.doc/7) Geneva, May 1991.

39/ Policy Research Incorporated, "Health status ...", op. cit., p. 9.

40/ Giacaman, R., "Life and health ...", op. cit.

41/ Policy Research Inc. "Health status ...", op. cit., pp. 33-34.

42/ Katbeh, Samir, "The status ...", op. cit.

43/ An independent Israeli researcher and previous deputy mayor of Jerusalem.

44/ Benvenisti, M. **The 1986 Report**, The West Bank Data Base Project, Jerusalem, 1986, p. 17.

45/ For more information on this subject, see the Union of Palestinian Medical Relief Committees, **An overview of health conditions and services in the Israeli occupied territories**, Jerusalem, August 1987.

46/ Israeli Civil Administration, **Statistical report, health services, Judea and Samaria** series.

47/ Policy Research Inc., "Health status ...", op. cit., p. 33. Also note that data on costs and financing of governmental and private health services are unavailable for both Palestinian and foreign researchers. See ibid., p. 32, for a similar account of the difficulty of obtaining exact and accurate data.

48/ See for instance, Abdalah, S, "The effects of Israeli occupation on the economy of the West Bank and Gaza Strip", in Nassar, J., and Heacock, R., **Intifada, Palestine at the crossroads**, Prager Press, New York, 1990, pp. 37-51.

49/ The analysis that follows under this section relies on information obtained from field work. These data were double-checked by making comparisons with lists and information obtained through discussions with most major health institutions operating in the territory at present. This step was necessitated by the fact that the data furnished by the Israeli authorities in yearly reports on health conditions in the West Bank and Gaza Strip to international agencies, such as the World Health Organization, could not be substantiated either in terms of the quantity or the quality of services rendered to the population by the governmental health services sector. Table 2 clearly shows the discrepancy between Israeli figures and actual fact. For instance, the authorities state that there are 45 health centres (including clinics, maternal and child health (MCH) centres, and health rooms) in the Jenin area, when in fact there are only 33. A similar pattern was observed for other regions as well, where Israeli figures generally indicate that there are 271 MCH centres operated by the Government in the West Bank, excluding Jerusalem, when field data indicates there are actually 177.

50/ These include hospitals, birthing centres, rehabilitation centres and institutions for the disabled.

51/ As is noted below in the text, Nablus fares better than most other districts of the West Bank and Gaza Strip in virtually every medical and health services index measured.

52/ Latin names have been correlated with the common names of these herbs by referring to Istfan, F., **Materia medica of the organic chemical substances**, American University of Beirut Press, Beirut, 1934. For further information regarding the therapeutic use of botanical compounds, see, for instance, Chase et al., **Remington's pharmaceutical sciences**, McMillan, Eaton, 1970.

53/ Field investigation of selected localities, 1990.

54/ While restrictions such as those preventing the acquisition of permits for operating clinics and health facilities have always posed serious problems for Palestinian non-governmental organizations in their attempt to develop health services in the territory, new and more extreme measures have emerged as well. In the summer of 1991, for example, several clinics operated by the popular movement were assaulted by the Israeli army.

55/ This information was obtained from the unpublished data of the Union of Palestinian Medical Relief Committees on a recent dental screening/survey conducted in 15 urban and rural localities in the West Bank.

56/ For further information regarding this biological predisposition of boys to death and disease, see Waldron, E., "Sex differences in human mortality: The role of the genetic factor", **Social science and medicine**, 17/6, 1983 and Waldron, E., "Sex differences in illness incidence, prognosis and mortality: Issues and evidence", **Social science and medicine,** 17/6, 1983.

57/ For a more detailed description of this phenomenon, see Giacaman, R., "Life and Health ...", op. cit.

58/ See, for instance, Al-Haq, **Punishing a nation, human rights violations during the Palestinian uprising: December 1987 December 1988**, Ramallah, 1989, and Al-Haq, **Punishing a nation, Al-Haq's annual report on human rights violations in the occupied Palestinian territories, 1989**, Ramallah, 1990.

59/ This estimate was obtained from the Gulf Returnee Committee of the West Bank and Gaza Strip - a committee which was primarily concerned with the problems of returnees and their families.

60/ **The Use of Essential Drugs**, Third Report of the WHO Expert Committee, Technical Report Series No. 770, Geneva, World Health Organization, 1988 and **The World Drug Situation**, World Health Organization, 1988.

61/ **INRUD News, Newsletter of the International Network for Rational Use of Drugs**, Number 1, March, 1990, p. 1.

62/ **Development and Implementation of Drug Formularies**, PAHO Scientific Publication No. 474, Pan American Health Organization, the World Health Organization, Washington, 1984, p. 1.

63/ The discussions that the author had with Mr. Talal Nasir al-Din, Manager of Birzeit Pharmaceutical Company, contributed substantially to her increased understanding of the dynamics involved in pharmaceutical production in the West Bank and Gaza Strip.

64/ One of the most developed companies, Birzeit Pharmaceutical Company, had successfully competed in a bid to manufacture drugs for Algeria. However, because of the situation created by the Gulf war, the agreement was undermined.

65/ Laing, R., "Rational drug use: an unsolved problem", **Tropical doctor**, July, 1990, pp. 101-103.

66/ It should be noted that this was the situation prior to the establishment of the Palestinian Health Council, whose coordinating and consolidating role remains to be seen.

TABLES

Table 1. Infant mortality and population growth, West Bank, 1968-1981

	1968	1974	1980	1981
Population (thousands)	581.7	661.6	703.1	723.8
Birth rate (per 1 000)	44.0	45.5	43.7	44.3
Crude mortality (per 1 000)	4.8	5.3	5.5	5.6
Infant mortality (per 1 000)	33.6	30.7	28.3	29.1

Source: Reconstructed from **Health and Health Services in Judea, Samaria and Gaza 1982-1983**, Report of the Minister of Health of Israel to the Thirty-Sixth World Health Assembly, World Health Organization, Geneva, May 1983, Jerusalem, March 1983, p. 4.

Table 2. Governmental primary care services by region, West Bank

(Comparison of government data, 1990, and field data, 1991)

District	Population a/	Number of services (clinics and MCH)	
		Government a/	Field data b/
Jenin	150 000	45	33
Nablus	150 000	42	29
Tulkarm/Qalqilia	144 200	66	39
Ramallah	143 400	44	28
Jericho	14 600	4	5
Bethlehem	95 400	20	12
Hebron	221 400	50	31
Overall West Bank without East Jerusalem	919 000	271	177

Sources:

a/ State of Israel, Ministry of Health, **Health in Judea, Samaria and Gaza**, Jerusalem, 1990. Government services include general clinics, maternal and child health centres, satellite health centres and specialty clinics.

b/ These figures are based on tables furnished by the WHO Collaborating Centre in Ramallah as well as the Health Development Information Project, a primary health care research group based in Ramallah, and double checked by fieldwork.

Table 3. Primary care clinic by institution and region, 1991

District	Population		Clinics		Thereof	
	Total	%	Total	%	Government	Private
Jenin	150 000	16	63	16	33	30
Nablus	150 000	16	67	17	29	38
Tulkarm/Qalqilia	144 200	16	56	14	39	17
Ramallah	143 400	16	88	22	28	60
Jericho	14 600	2	10	3	5	5
Bethlehem	95 400	10	44	11	12	32
Hebron	221 400	24	66	17	31	35
Overall West Bank without East Jerusalem	919 000	100	394	100	177	217
Gaza Strip	615 000		70		..	..

Source: Field research data.

Table 4. Clinics a/ of the Health Care Committees, by region and locality, 1991

Region	Locality	
	Village	Town
Jericho	1	-
Bethlehem	1	1
Jerusalem	2	1
Ramallah	3	-
Nablus	7	2
Hebron	2	-
Jenin	3	-
Tulkarm	2	1
Gaza Strip	-	1 b/
Total	21	6

Source: Field research data from the Health Care Committees.

a/ Most working on a part-time basis, not a daily programme: curative, health education, first aid, maternal and child health, without immunization. Average daily patient load (calculated from figures furnished by the Committees): 6 patients daily, based on an average of 22 working days monthly.

b/ Refugee camp.

Table 5. Clinics of the Popular Health Committees monthly patient load by region, and district, 1991

Region	Total monthly	Number of clinics in the region			
	Load ÷ 22 days	÷ (village)	+ (town)	+ (camp)	= average daily patient load
Jenin	499	4	-	-	6
Qalqilia	533	1	1	-	12
Nablus	1 366	9	1	1	6
Ramallah	919	4	1	1	7
Jerusalem	521	-	1	-	24
Hebron	958	4	1	-	9
Bethlehem	467	1	1	1	7
Gaza Strip	3 193	1	1	6	18
Total a/	7 935	24	7	9	9

Source: Information obtained from Popular Health Committees and field research.

a/ Excluding East Jerusalem for which the average daily patient load is exceptionally high compared to the average for the West Bank and Gaza Strip (where clinics are mainly in rural or semi-urban areas).

Table 6. Clinics a/ of the Union of Palestinian Medical Relief Committees, by district, 1991

District	Number
Jericho	4
Tulkarm/Jenin	7
Ramallah	11 b/
Jerusalem	1
Bethlehem	1
Hebron	2
Nablus	2
Gaza Strip	4
Total	32

Source: Field research data from Medical Relief Committees.

a/ Average daily patient load: 27 (calculated from figures furnished by the Committees and based on a month of 22 working days).

b/ In six clinics the Union has a vaccination programme, one of the very few operated by Palestinian non-governmental organizations. This was possible through an agreement with UNRWA.

Table 7. Union of Palestinian Medical Relief Committees, supporting health services by type, 1991

Type of service	Number
Laboratories	9
Rehabilitation Centres	9
Women's Health Clinics	20 a/
Mobile clinics	9 b/
Mobile dental units	5
Mobile dermatology units	2
Mobile ophthalmology units	1

Source: Field research data from Medical Relief Committees.

a/ Patient load is 35 women per session.

b/ These cover around 190 villages, with an average monthly load of 7,000 patients.

Table 8. Clinics of the Health Services Council, by district, 1991

District	Number
Tulkarm/Jenin	21
Ramallah/Jerusalem	10
Bethlehem	9
Hebron	11
Nablus	12
Total	63

Source: Field research data from Health Services Council.

Table 9. Primary health care services by region and institution Red Crescent (RCS) and Patient's Friends societies (PFS), West Bank, 1991

Region Institution	Health Centre	Ambulance Emergency	Lab.	X-ray	Doctors	Nurses	Other
RCS Nablus	2	7	-	-	6	20	22
RCS Tulkarm	13	3	3	1	17	23	15
RCS Bireh	1	2	1	-	6	5	6
RCS Ramallah	1	1	-	-	1	1	2
RCS Jenin	1	2	-	-	1	2	2
	Hospital maternity centres						
RCS Jerusalem	1	1	1	-	10	25	1
RCS Hebron	1	-	-	-	-	-	-
	Health Centres						
PFS Nablus	2	5	1	1	12	17	16
PFS Ramallah	8	-	-	-	8	8	-
PFS Ramallah Rehab. Centre	1	-	-	-	6	13	9
PFS Ramallah (Rural)	8	-	-	-	8	8	
PFS Tulkarm	1	2	1	1	7	21	9
PFS Jenin	4	1	-	-	-	-	-

Source: Field research data from the institutions concerned.

Table 10. Non-governmental primary care services, east Jerusalem, 1991

Name	**Type of Service**
Hamilat al-Tib	General and speciality clinic
Arab Women's Union	Maternal and child health, first aid
Sayidat al-Bishara	Maternal and child health, speciality clinics laboratory, public health and dentistry
Red Crescent	Outpatient obstetrics/gynaecology clinics and paediatrics
Maqassed Hospital	General and specialty outpatient clinics, lab and diagnostic centre
Union of Palestinian Medical Relief Committees	General and specialty clinic, obstetrics/gynaecology, dermatology, laboratory, health education, environmental sanitation, school health, rehabilitation
The Jordan Family Planning Society	Health counselling for mother and family
Silwan Charitable Society	General clinic and health education
Su'fat Refugee Camp Charitable Society	General clinic and health education
The Arab Medical Centre	General clinics, laboratory, x-ray

Source: Field research data.

Table 11. Hospitals by sector and district, 1991

District	Number of hospitals		Total
	Government	Private	
Jenin	1	1	2
Tulkarm	1	1	2
Nablus	2	2	4
Ramallah	1	-	1
Bethlehem	1	3 a/	4
Jericho	1	1	2
Jerusalem	-	5 a/	5
Total West Bank	7	13	20
Gaza Strip	3	1	4

Source: Field research data.

a/ Includes an obstetrics/gynaecology hospital with more than 25 beds.

Table 12. East Jerusalem hospitals by staff and service, 1991

Hospital	Beds	Specialists	Services Other Physicians	Nurses	Lab.	Other
Al-Maqassed	240	30	68	230	30	10
St. John's Ophthalmic	82	7	2	57	1	4
St. Joseph's	44	17	4	15	2	2
Augusta Victoria a/	140	11	24	170	8	12
Maternity centres						
Al-Kuds	20	4	2	19	-	-
Al-Hilal	40	4	6	21	1	1
Dajjani	10	6	-	11	2	-

Source: Field research data.

a/ For refugees (UNRWA referral).

Table 13. A comparison of Israeli figures to field research data - number of hospital beds, 1990

Hospital	Number of beds	
	Israeli data	Field data
Al-Watani (Government) in Nablus	86	60
Tulkarm (Government)	63	35
Beit Jala (Government)	64	56
Hebron (Government)	103	86

Source: Israeli data from State of Israel, Ministry of Health, **Health in Judea, Samaria and Gaza, 1989-1990**, Jerusalem, April, 1990, p. 22

Table 14. Hospital beds by population and district, 1991

District	Population	Beds number a/	Beds/1000 people
Jenin	150 000	68	0.5
Nablus	150 000	365	2.4
Tulkarm	144 200	66	0.5
Ramallah	143 400	136	1.0
Jericho	14 600	50	3.4
Bethlehem	95 400	185	1.9
Hebron	221 400	116	0.5
East Jerusalem	150 000	516	3.4
Total West Bank	1 069 000	1 502	1.4
Gaza Strip	615 000	738	1.2

Sources: Population figures are from the State of Israel, **Health and Health Services in Judea, Samaria and Gaza 1982-1983**, Report of the Minister of Health of Israel to the Thirty Sixth World Health Assembly, World Health Organization, Geneva, May 1983, Jerusalem, March 1983, p. 4 and Benvenisti, M. and Khayat, S., **The West Bank and Gaza Atlas**, The West Bank Data Base Project, Jerusalem, 1988.

a/ The number of beds used in these calculations is based on the figures obtained in field research. These figures exclude 320 beds at the mental hospital in Bethlehem. They also exclude some 40 obstetrics beds scattered within four maternity centres in Jerusalem, Bethlehem and Ramallah.

Table 15. Pharmacies, laboratories and diagnostic centres by district and locality, West Bank and Gaza Strip, 1991

District	Type of Service								
	Pharmacies			Laboratories			Diagnostic Centres		
	Town	Village	Total	Town	Village	Total	Town	Village	Total
Hebron	16	7	23	6	-	6	6	-	6
Tulkarm	20	6	26	5	-	5	2	-	2
Nablus	38	6	44	8	-	8	8	-	8
Ramallah	19	12	31	7	2	9	3	-	3
Bethlehem	18	8	26	7	-	7	5	-	5
Jenin	13	7	20	4	-	4	2	-	2
West Bank total	124	46	170	37	2	39	26	-	26
Per cent	73	27	100	95	5	100	100	-	100
Gaza Strip total	60	55	115	3	-	3	1	-	1
Per cent	52	48	100	100	-	100	100	-	100

Source: Field research data.

Table 16. Physiotherapy/Rehabilitation Services, Gaza Strip, 1991

Institution	Type of Service
Sun Day Care Centre	Day care and rehabilitation mostly for children
Shawa Artificial Limbs Centre	Centre for the production of artificial limbs
Union of Palestinian Medical Relief Committees	Physiotherapy and rehabilitation at the primary care level
Near East Council of Churches	Physiotherapy and rehabilitation at the primary care level
al-Ahli Hospital	Physiotherapy services

Source: Field research data.

Table 17. Institutions serving the disabled, by region and population of West Bank, 1991

Region	Percentage of institutions in region	Population percentage in region - of total population a/
Central	61	30
Northern	28	50
Southern	7	20

Source: Field research data.

a/ Population figures are recalculations of figures found in table 14.

Table 18. Type of services offered by rehabilitation institutions, West Bank, 1991

Type of service offered	Institutions offering service	Percentage of total institutions
Boarding	24	56
Curriculum education	12	28
Special education	34	79
Vocational training	17	40
Physiotherapy services	22	51
Medical care	23	47
Manufacturing of prosthesis	5	12
Counselling services	7	16
Entertainment	8	-
Total number of institutions	43	100

Source: Field research data.

Table 19. Number of West Bank doctors by region, sex and specialty, 1991

Type		Jerusalem	Ramallah	Bethlehem	Hebron	Nablus	Tulkarm	Jenin	Total	%
General	M	121	82	49	119	135	81	63	650	55
	F	15	13	9	7	31	6	7	88	7
Temporary	M	23	10	6	17	21	12	7	96	8
	F	1	-	1	-	5	-	1	8	1
Specialist	M	40	27	21	16	43	12	6	165	14
	F	2	1	1	-	5	-	-	9	1
Specialist board	M	21	16	23	22	47	25	12	166	14
	F	1	2	-	-	1	-	-	4	-
Grand total:		224	151	110	181	288	136	96	1 185	100
Percentage		19	13	9	16	24	11	8	100	

Source: Field research data from the Union of Physicians, the West Bank.

M: Male
F: Female

Table 20. West Bank doctors by country of training, 1991

Country of training	Number	Percentage of total
Arab countries	353	39
Eastern Europe	334	37
Western Europe	150	17
Greece/Italy	45	5
Pakistan/India	22	2
Total	904	100

Source: Field research data from the Union of Physicians, the West Bank.

Table 21. West Bank doctors by year of graduation

Year of graduation	Number	Percentage of total
Before 1970	151	17
1970-1979	284	31
1980-1990	470	52
Total	905	100

Source: Field research data from the Union of Physicians, the West Bank.

Table 22. Employment of physicians by sector, West Bank, 1991

Sector	Number	Percentage by sector		Total
		Government	Private	
Government hospitals	131	78	-	17
Government public health	38	22	-	5
Palestinian hospitals	245	-	42	31
Palestinian primary care	167	-	29	21
Pure private practice or mostly town clinics	170	-	29	22
UNRWA primary care	31	-	-	4
Total	782	100	100	100

Source: Field research data from the Union of Physicians, the West Bank and UNRWA Headquarters, Jerusalem.

Table 23. Physicians who passed the Board Examination by specialty, West Bank, 1991

Specialty	Number	Percentage of total
General and specialty		
Surgery	36	23
Internal medicine	31	20
Paediatrics	26	17
Obstetrics/gynaecology	25	16
Ear, nose and throat	11	7
Other	27	17
Total	156	100

Source: Field research data from the Union of Physicians, the West Bank.

Table 24. Nurses by sector of work and district, 1991

District	Sector of work				Total number		Distribution by district
	Hospitals Number	%	Primary care Number	%		%	%
Jerusalem	451	92	39	8	490	100	33
Ramallah	91	59	64	41	155	100	10
Bethlehem	201	88	28	12	229	100	15
Tulkarm	40	39	63	61	103	100	7
Jenin	22	34	42	65	64	100	4
Nablus	218	74	75	26	293	100	20
Jericho	12	54	10	46	22	100	1
Hebron	80	58	57	42	137	100	10
Total West Bank	1 115	73	413 a/	27	1 528 a/	100	100
Gaza Strip	505	64	134	36	951	100	100

Source: These figures have been furnished by Naila Ayed, who is working on a comprehensive nursing survey in the West Bank and Gaza Strip for AMIDEAST, Jerusalem. They include registered nurses, practising nurses, registered midwives and practising midwives.

a/ Includes 35 primary health care nurses whose location of work is unknown.

Table 25. Average number of nurses per 1,000 population by district, 1991

District	Population	Number of nurses	Nurses/1,000
Jenin	150 000	64	0.4
Nablus	150 000	293	2.0
Tulkarm	144 200	103	0.7
Ramallah	143 400	155	1.1
Jericho	14 600	22	1.5
Bethlehem	95 400	229	2.4
Hebron	221 400	137	0.6
East Jerusalem	150 000	490	3.3
Total West Bank	1 069 000	1 528	1.4
Gaza Strip	615 000	951	1.5

Source: See table 24.

Table 26. Nurses by specialty, 1991

Specialty	Number specialized		Percentage of total nurses a/	
	West Bank	Gaza	West Bank	Gaza
Intensive care	15	7	1.0	0.7
Coronary care	14	-	1.0	-
Emergency	5	2	0.3	0.2
Obstetric/gynaecology	22	1	1.4	0.1
Paediatrics	4	-	0.3	-
Anaesthesia	1	2	0.1	0.2
Orthopaedics	-	-	-	-
Rehabilitation	4	-	0.3	-
Medical/surgical	-	-	-	-
Theatre	6	1	0.4	0.1
Infection control	-	-	-	-
Primary health care	3	-	0.2	-
Health education	2	-	0.1	-
Management	14	-	0.9	-
Total specialized	90	13	6.0	1.3

Source: See table 24.

a/ Total West Bank nurses: 1,528; Gaza Strip nurses: 951.

Table 27. West Bank pharmacists by region, 1991

Region	Number	Percentage of total
Jerusalem	49	16
Bethlehem	30	10
Ramallah	46	15
Hebron	36	12
Nablus	79	25
Tulkarm	36	11
Jenin	27	9
Jericho	7	2
Total	310	100

Source: Field research data from the Union of Pharmacists, the West Bank.

Table 28. West Bank dentists by region, 1991

Region	Number	Percentage of Total
Jerusalem	44	16
Bethlehem	22	8
Ramallah	44	16
Hebron	41	15
Nablus	64	23
Tulkarm	31	12
Jenin	29	10
Total	275	100

Source: Field research data from the Union of Physicians, the West Bank.

Table 29. Pharmaceutical companies by location and personnel, 1991

Name of company	Location	Total staff
Birzeit for Drug Manufacturing	Birzeit/Ramallah	110
Jerusalem for Health Material	Bireh/Ramallah	98
Balsam for Drug Manufacturing	Ramallah/Ramallah	70
Palestine for Drug Manufacturing	Ramallah/Ramallah	50
Jordanian Chemical Co.	Beit Jala/Bethlehem	40
Dar al Shifa for Drugs	Beitunia/Ramallah	35
Northern for Drug Manufacturing	Ramallah/Ramallah	30
Gama	Beitunia/Ramallah	25
Al-Razi Drug Co.	Hebron/Hebron	15
Salha Co. for Drugs	Gaza City/Gaza Strip	4
Total staff		477

Source: Field research data.
