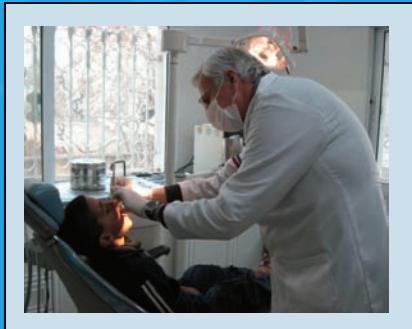


The Annual Report of the Department of Health

2008



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**The Annual Report of the
Department of Health**

2008



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Foreword

The beginning of 2009 has a different color and smell in Palestine. While the rest of the World exchange Seasons Greetings, Gaza bleeds of deaths. Destruction and confusion fill the air. From December 27, 2008 the Israeli Defense Forces carried out a three-week high intensity military operation damaging hospitals, primary health care centers, ambulances and killing civilians. UNRWA infrastructures and supplies were severely damaged or destroyed by precision bombs.

The semantics of war usually disguise obvious truths; consider phrases such as “friendly fire,” “disproportionate response,” “collateral damage”. Statistics can offer a somewhat cold assessment of the damage inflicted by war. According to the World Health Organization, the incursion left 1 366 Palestinians dead of whom 446 were children, 111 women and 108 elderly. During the same period, Israel listed 14 deaths; three were civilians, victims of the Palestinian rocket attacks that continued throughout; most of the military that died had been accidentally shot by their own forces.

The number of dead can be measured with reasonable accuracy, though some innocent victims are never found, or are buried with understandable disregard for those who caused such grief. The number of wounded, 5 380 with high proportions of women and children is a much more fluid figure. But how does one measure pain, or the permanent deformity caused by white phosphorus, or the life-long impact of lost limbs? Do we have any way to calculate the terror from bombings, or from the eerie white phosphorous glow that cannot be extinguished, from the resultant burns, or from the scars of panic and of families broken apart by useless death? When war came, there was literally nowhere to flee, no safe haven as neighboring countries are required to provide under international refugee law.

I visited Gaza on the second of February with the WHO Regional Director. I visited health clinics where hundreds of displaced persons waited to receive medical care. While this programme may save people from communicable diseases, their diet does not prevent the highest level of anemia in the region, with alarming rates of childhood stunting due to inadequate nutrition. I made clinical rounds in the partially destroyed Palestinian Red Crescent Society Hospital: one night doctors were forced to evacuate hundreds of patients after an incendiary bomb caused a fire that consumed the top four floors of the institution. Doctors described receiving injured patients with grossly infected, putrid wounds because they had not been allowed leave their homes for up to seven days after being injured. Besides the obvious injuries, other medical crises loom. Forty percent of those with chronic diseases such as hypertension or diabetes could not get access to their routine drugs for the duration of the war, and some died. Deafness due to sonic booms, and bombs, mental health problems due to trauma, to the loss of loved ones or to being forced to live through a war.

Foreword of the Director of Health

The response of UNRWA health staff in Gaza was extraordinary with 60% of staff, able to reach duty stations, providing basic health services to over a million refugees even in very critical moments. They were encouraged and materially supported by colleagues from Headquarters and all other Fields. We are proud to be part of UNRWA's health programme and here I convey my thanks to you all.

In the other Fields of UNRWA operations, 2008 was an intense year for programme review and planning. The UNRWA Health Programme remains extraordinary in many ways: it is a unique service delivery system, established against formidable obstacles over many decades marked by severe, recurrent turmoil. It serves a unique population. It is staffed by loyal, committed and frequently life-long workers, who largely belong to the refugee population. The comprehensiveness of the health package offered to refugees over their whole life cycle is a commendable strength, in view of the worldwide proliferation of vertical initiatives that fragment and projectize health services.

However, given the total dependency on donor funding, the Health Programme is inherently unsustainable and the severe financial crisis affecting the world can only fatally impinge on international aid flows, to an extent now difficult to forecast. It seems therefore prudent to prepare in advance for a protracted funding contraction, through the identification of functions to be protected, and of areas where substantial savings can be attained without undermining health care delivery.

There are many ways of serving Palestinian refugees effectively. One is keeping the Health Programme functioning along time-honored lines, but at the same time we have to explore approaches capable of delivering better health services even in contexts now difficult to predict.



Dr. G. Sabatinelli

WHO Special Representative
Director of the UNRWA
Health Programme

A handwritten signature in black ink, appearing to read "G. Sabatinelli".

Message of the UNRWA Commissioner General and of the WHO Regional Director

UNRWA's vision is for every Palestine refugee to enjoy the best possible standards of human development, including attaining his or her full potential individually and as a family and community member; being an active and productive participant in socio-economic and cultural life; and feeling assured that his or her rights are being defended, protected and preserved.

In 2008, the occupied Palestinian territory continued to experience the most dramatic developments in the Agency's area of operations. In the Gaza Strip, the year both began and ended with major conflicts in which hundreds of Palestinians were killed; conflicts which book-ended a six month ceasefire between the Palestinian factions and the Israeli military. Israel's blockade of the Gaza Strip continued to seriously impact on all aspects of life. In the West Bank, the regime of closures, house demolitions, settlement expansion, curfews and seizure operations continued alongside the extension of the illegal West Bank Barrier. There was reduced tension in Lebanon following the selection of a new President.

Again challenges strike UNRWA in the midst of financial constraints and again the Health Programme has managed through strict optimization of resources to meet the health needs of the beneficiaries. UNRWA is more than ever indebted to its staff and acknowledges their dedication and loyalty without which the results obtained year after year would never have been achieved. However, we should not stand back and admire what we have delivered with so little. UNRWA is a global advocate for the protection and care of Palestine refugees. In humanitarian crisis and armed conflict, the Agency's emergency interventions, and its presence, serve as tangible symbols of the international community's concern and ultimately contribute to a stable environment. We need to make our voice heard and strive to improve the resources and the quality of health services.

The Health Programme continues to function with limited equipment and supplies and many of the Agency's doctors see more than 100 patients a day. This situation is not sustainable nor desirable and has to be addressed if UNRWA is to retain its place as a reliable provider of health services to Palestine refugees. 2008 has been a year where alternative solutions have been looked for through operational research studies and evaluations that encompassed the whole Programme. The shift towards community health where prevention plays the major role, is inevitable due to the unsustainable cost of tertiary care and the goal of mitigating health inequities among Palestine refugees. It has been a year of analysis the results of which will influence the way primary health care will be delivered to Palestine refugees in the years to come.

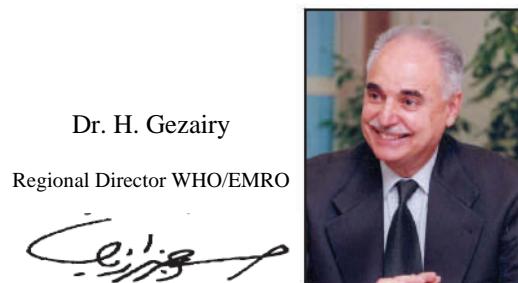


Karen Koning Abu-Zayd

UNRWA Commissioner General

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Dr. H. Gezairy

Regional Director WHO/EMRO

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Executive Summary

The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) has been the main comprehensive primary health care provider of Palestine Refugees for the past 60 years and is the largest humanitarian operation in the Near East. The Mandate of the Health Programme is to protect, preserve and promote the health status of Palestine refugees within the Agency's five areas of operation (Jordan, Lebanon, Syria, the Gaza Strip and the West Bank) aiming for them to achieve the highest attainable level of health consistently with the Millennium Development Goals (MDGs), the Convention on the Rights of the Child and the policies and strategies of the World Health Organization.

This report provides a comprehensive and technical overview of the achievements of the Health Programme throughout 2008. It is divided in seven chapters. After providing an overview of the demographic and epidemiological profile of the Agency's beneficiaries, the reader will find detailed information on each of the Health Department's sub-programmes:

- Curative Medical Care Services;
- Health Protection and Promotion;
- Disease Prevention and Control;
- Environmental Health; and
- Emergency Preparedness and Response.

The final chapter of this report is dedicated to the Programme Management stream which outline the accountability and governance mechanisms adopted in 2008 in order to provide health care to Palestine refugees as well as the advocacy , monitoring, evaluation and operational research initiatives that have taken place in the reporting period. This executive summary reflects the chapter subdivision adopted in this report.

Chapter 1 The Health Programme Today

By the end of 2008, 4.7 million Palestine refugees were registered with UNRWA. Almost two million of these refugees resided in the occupied Palestinian Territories (oPt) in the Gaza Strip and in the West Bank. The remaining were spread over three host countries: Lebanon, Syria and Jordan. Just under 30% lived in refugee camps, the others residing in unofficial camps or in towns, and villages with host country communities. Across UNRWA's area of operation 37.8% of refugees are children below 18 years of age. The demographic profile of the registered Palestine refugees in Lebanon, Jordan and Syria is comparable to that of other countries of the Near East, conversely in the oPt, particularly in the Gaza Strip, there is a higher proportion of children under 15 and the fertility rate is higher both considering UNRWA and National estimates. The UNRWA calculated 2008 dependency ratio, measured as the proportion of the population below 15 and above 65 years of age, was almost 90% in the Gaza Strip. This implies that the economic burden on family units is particularly high, even not taking into account the contextually high unemployment rates and worsening poverty levels.

Chapter 2 Curative Medical Care Services

UNRWA currently runs 137 Primary Health Care (PHC) Health Centres and one hospital. In 2008, UNRWA medical officers provided almost ten million consultations. These were complemented by 760 674 dental consultations and 246 758 dental screening sessions. All activities showed an increasing trend compared with 2007 except dental screening. About 85 000 people were assisted by the programme to cover hospital care costs in 2008, either in contracted secondary/tertiary care facilities or in the UNRWA hospital in Qalqilia (West Bank). Qalqilia hospital had an average daily bed occupancy rate in 2008 of 55.3% and 6 026 people were admitted. In order to meet the demand for physical rehabilitation in the oPt as a result of violence, UNRWA operates nine physiotherapy units in Gaza and six units in West Bank, providing a wide range of physiotherapy and rehabilitation services. In 2008, 11 007 patients were treated.

Chapter 3 Health Protection and Promotion

Maternal and child health are one of cornerstones of UNRWA's primary health care. During 2008, UNRWA provided antenatal care to 102 145 pregnant women, postnatal care to 89 418 women and family planning to about 133 000 clients. Almost 275 000 children younger than three years of age were assisted. Comprehensive school health services, were provided to children enrolled in UNRWA schools. To assist refugee household coping mechanisms, UNRWA is placing special emphasis on developing Agency-wide strategies for psychosocial well-being, especially among children and youth. Structured mental health programmes are being implemented in the Gaza Strip and West Bank. During 2008, the Community Mental Health Program conducted 35 278 individual counselling sessions, 12 193 group counselling sessions, 21 753 group guidance awareness, 4 802 public awareness meeting and 4 863 home visits reaching almost 700 000 beneficiaries.

Chapter 4 Disease Prevention and Control

A mumps outbreak took place in Lebanon in 2008, 521 cases were reported of which 300 from a single Health Centre. A full investigation took place and a mass vaccination campaign was successfully implemented. Immunization coverage of infants and children remained high and zero incidence of polio and tetanus was maintained throughout the reporting period. Proportional mortality among patients affected by diabetes and hypertension followed by UNRWA NCD clinics remained stationary compared with 2007, but the number of beneficiaries assisted increased steadily since 2000 reaching 177 283. This confirms the epidemiological trend that is seeing an increasing importance of Non Communicable Diseases (NCD) as causes of morbidity and mortality among Palestine Refugees.

Chapter 5 Environmental Health

Delivery of essential sanitation and water services was maintained in 2008 notwithstanding difficulties faced in particular due to the closure regime in the oPt. Regular bacteriological and chemical analysis of drinking water was performed in all UNRWA installations in Syria to verify the quality of drinking water. The same comprehensive bacteriological testing was carried out by the Agency in Jordan and in 400 water samples in Lebanon where also part of the water distribution network was rehabilitated during the year. Among vector control activities, chemicals, oil and tools were provided to municipalities for mosquito eradication campaigns, particularly for the stagnant water pools in the Wadi Gaza.

Chapter 6 Delivering Health to the Victims of Conflict

2008 not only saw UNRWA struggling with the chronic emergency in the oPt that ended tragically with a war in the Gaza Strip, but also in following-up the post-emergency phases of Nahr el-Bared camp in Lebanon and of the Palestine refugees that fled Iraq and are still waiting for relocation near the Syrian-Iraqi border. Outreach services in particular in the West Bank intensified. The five teams serving this area have treated an increasing number of Palestinian refugees (from 69 500 in 2003 to 139 992 in 2008). Emergency funds have also permitted to recruit additional staff and put in place other compensation mechanisms to limit the consequences of movement restrictions in the oPts on patients and staff members' access to UNRWA duty stations and on medical supply provision as well as the effects of conflict and socio-economic hardship across the Agency's area of operations.

Chapter 7 Programme Management

The Health Programme's expenditure in 2008 was US\$ 85 million. Around 4 100 staff members work for the Health Department across the Five Fields of operation, including the staff employed in Qalqilia hospital, specialists, school medical officers, pharmacists, laboratory and X-ray technicians. The staff to population ratio in 2008 was 13.8 for physicians and 33.5 for nurses, a slight decrease since 2007. 2008 was a year of monitoring and evaluations where operational research was used to find ways to optimize service delivery and increase efficiency in order to face the chronic financial constraints of the Programme. Advocacy also among the scientific medical community was fostered through the publication in scientific international journals. Strong ties with international partners were maintained and expanded, these include other United Nations Organizations, Ministries of Health (MoH) in the host countries as well as Universities and Academic Institutions.



The UNRWA Health Programme

a two-tiered approach to delivering primary health care services

The roots of health inequities lie in social conditions outside the health system's direct control. These root causes have to be tackled through intersectoral and cross-government action. At the same time, the health sector can take significant actions to advance health equity internally.

WHO World Health Report 2008

The Health Programme today

The mandate of the United Nations Relief and Works Agency's (UNRWA) health programme is to protect, preserve and promote the health of Palestine refugees and to meet their basic health needs. For the past 60 years the Agency has been the main comprehensive primary health care provider for the Palestine refugee population.

The curative and preventive health services provided include ante-natal and post-natal care of pregnant women, family planning, follow-up of infants and children (growth curve monitoring, medical check-ups and vaccinations), outpatient consultations, oral health, school health, mental health and management of diabetes and hypertension. Control of communicable diseases is achieved in part by high vaccination coverage and in part by the early detection and management of outbreaks through a health centre based epidemiological surveillance system. The environmental health programme controls the quality of drinking water, provides sanitation and carries out vector and rodent control in refugee camps thus reducing the risk of outbreaks. In 2008, the Agency manages a network of 137 clinics, located both inside and outside the refugee camps, serviced by 4 087 health care workers, including 423 doctors. In 2008 alone, UNRWA's primary health system provided 9.9 million medical consultations.

Although the Agency started operating in a classic post-conflict situation, since then the socio economic conditions of its beneficiaries have diversified according to the political and economic situation of their host countries, including the recognition of refugee status and the level of access to Government services. Refugees are therefore a diverse population with diverse needs and health priorities. On top of this, the chronically volatile security context in this part of the Middle East, has obliged UNRWA to adopt a dynamic two tiered approach balancing emergency relief with human development according to the situation on the ground. It has made UNRWA an extremely adaptable Agency capable of guaranteeing the continuity of its services though closure regimes as well as full blown conflicts.

Population served in 2008

In this introductory overview of the health status of the population served by UNRWA in 2008, we will first of all describe the socio-economic profile of Palestine refugees in each of the host countries where they reside, dwelling on access inequity to health and health care services.

Lebanon hosts 422,188 Palestine refugees, of whom over 50 percent live in refugee camps. Palestine refugees in Lebanon cannot benefit from the State's social service including health care. Their generally illegal resident status, the employment restrictions they face combined with the high cost of work permits, account for their protracted financial dependence[1]. Access to health care for Palestine refugees in Lebanon is restricted to UNRWA, International Organizations and the private sector, the latter demanding mostly prohibitive fees for service. Uniquely in this Field, UNRWA has stipulated agreements with Palestinian Red Crescent Society Hospitals to guarantee equity in access to secondary health care. In all other Fields a reimbursement scheme is in place for secondary and tertiary care.

Syria and Jordan host 461 897 and 1 951 603 refugees respectively [2]. Palestine refugees in these countries enjoy full social rights. In Syria they are given the rights of citizens. In Jordan Palestine refugees are granted citizenship based on criteria such as place of origin (i.e. the West Bank) and year of arrival. The Gazans living in Jordan face restrictions on access to higher education and jobs [3] and are therefore the most vulnerable group [4]. Palestine refugees, whilst remaining a potentially fragile population overall, have in these countries been allowed to enter the labour market and have social mobility.

The occupied Palestinian territory is suffering the long-term effects of socio-economic hardship due to the closure regime in place that is effectively limiting the movement of people and goods both in the West Bank and the Gaza Strip. Palestine Refugees living in West Bank and the Gaza Strip however have access to health services of the Palestinian Authority (PA) and of all

other health providers. In this section, the situation Palestine Refugees in the occupied Palestinian territory (oPt) is not expanded upon, as a detailed description is found in Chapter 6 of this report.

Almost three million refugees accessed UNRWA primary health care services, both preventive and curative, during 2008, a proportion comparable to 2007 (Table 1). Analysing data by Field a slight decrease was registered only in Jordan, in other Fields proportions remained within a one percent interval compared with the previous year. The number of refugees registered and accessing UNRWA health services since 2002 are depicted in Figure 1. Whilst the number on registered refugees shows a steady increase throughout the years, we observe a slight decrease in the number of refugees accessing health services outside the oPt. This trend is not confirmed in Gaza Strip and the West Bank where even though the proportion of refugees accessing UNRWA health services is different (68 percent in the West Bank and 81% in the Gaza Strip), the trend follows approximately that of the registered population. This is suggestive of an unchanged, continuative dependency of almost all the refugee population in the Gaza Strip and a particularly vulnerable subgroup of refugees in the West Bank, on UNRWA health services (Figure 1).



Demographic and epidemiological profile of Palestine refugees

Demographic overview

More than four and a half million [5] Palestine refugees are assisted by UNRWA, a rapidly growing, young population with high fertility rates (Table 2) and increasing life expectancies. Across UNRWA's area of operation 41 percent of refugees are children below 18 years of age. The demographic profile of the registered Palestine refugees in Lebanon, Jordan and Syria is comparable to that of other countries of the Near East, conversely in the occupied Palestinian territory (oPt), particularly in the Gaza Strip, there is a higher proportion of children under 15 and the fertility rate is higher both considering UNRWA and National estimates. The UNRWA calculated 2008 dependency ratio, measured as the proportion of the population below 15 and above 65 years of age, was almost 90 percent in the Gaza Strip. This implies that the economic burden on family units is particularly high, even not taking into account the contextually high unemployment

rates and worsening poverty levels (Table 1).

Progress in achieving MDGs

Millennium Development Goal (MDG) targets for infant mortality (Figure 3) have been reached by UNRWA in Jordan, Lebanon and the West Bank. Rates are in line with host countries except in Syria that consistently reports lower mortality figures. This could be related to the different sampling of the surveys as Palestine refugees in Syria are only 2.3 percent of the population whereas they constitute between 10.6 and 71.5 percent of the population in other countries making an overlapping of survey results more likely.

There are signs of a stabilization of infant mortality trends especially observing the preliminary results of the UNRWA 2008 survey for Jordan, West Bank and Syria. This was expected as post delivery and neonatal assistance is mainly provided by public health care services and, therefore infant mortality rates cannot be expected to decrease significantly below national levels until health infrastructure and human resource development allows secondary and tertiary facilities to reduce prematurity, low birth weight and malformation

Table 1 - Demographic indicators by Field, 2008

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	All fields
Population of host countries in 2008	6 198 677	3 971 941	19 747 586	1 500 202	2 407 681	33 826 087
Registered refugees	1 951 603	422 188	461 897	1 073 303	762 820	4 671 811
Proportion (%) of refugees in host countries	31.5	10.6	2.3	71.6	31.7	13.8
Proportion (%) of refugees accessing UNRWA health services in 2008 (absolute number)	56.6 (1 104 607)	56.0 (236 425)	72.0 (332 566)	81.0 (869 375)	68.0 (518 718)	65.5 (3 061 691)
In camps %	17.3	52.8	27.1	46.1	25.3	29.4
Outside camps %	82.7	47.2	72.9	53.9	74.7	70.6
Aging index	38.7	59.9	36.5	20.7	34.8	34.1
Male/female ratio	1.1	1.0	1.0	1.0	1.0	1.0
Dependency ratio	68.75	56.09	68.98	86.97	73.42	72.12

Sources UNRWA Registration Statistical Bulletin of the fourth quarter 2008 and CIA World Fact-book (<https://www.cia.gov/library/publications/the-world-factbook/index.html> last accessed on the 9th of February 2009)

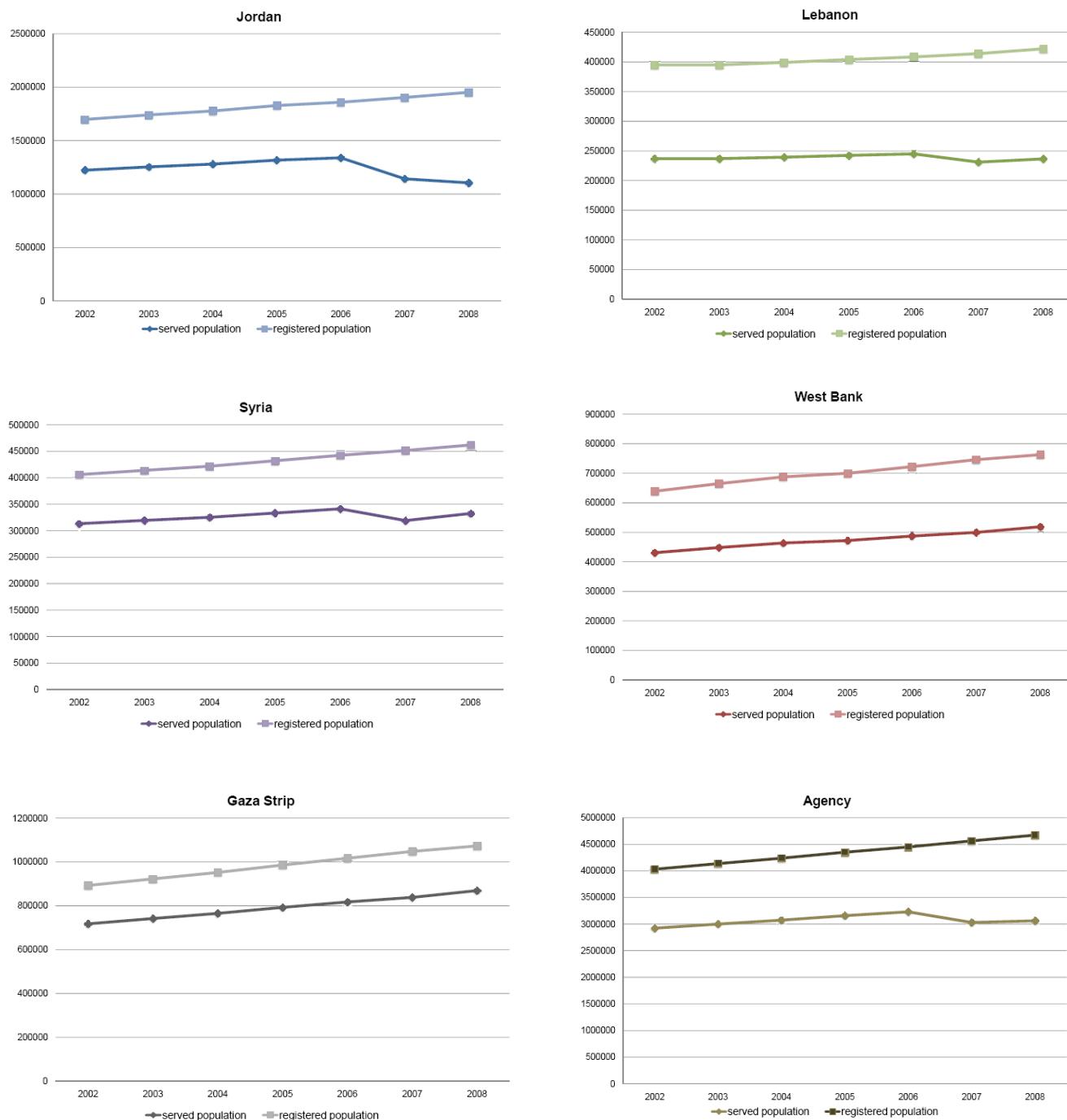


Figure 1 - Palestine Refugees registered with UNRWA and accessing UNRWA Health Services, 2002-2008

related deaths, that are the leading causes of infant mortality today.

Other MDG indicators for Palestine Refugees residing outside the oPt are overall comparable to those of their host countries (Figures 4-6). In the oPts however the Gaza Strip compares overall unfavorably with the West Bank although they share the same healthcare providers and have comparable populations (Table 3). This finding is consistent whether considering data for the whole Gazan population (Palestine National Authority/ WHO) or refugees (UNRWA). The Gaza Strip has consistently higher infant (Figure 2) and maternal mortality rates (Table 3), a lower life expectancy (Table 2), and reports higher levels of undernutrition and micro-nutrient deficiency.

Vaccine-preventable diseases are well under control in all UNRWA's areas of operation and MDG monitored measles immunization coverage (Figure 3) is consistently above 95 percent and in line with national rates. The decline in infectious disease incidence is a generalized trend in the region and leading causes of death of Palestine refugees have shifted from communicable to non communicable diseases such as cardiovascular diseases and cancer. However diseases associated with poor environmental health, such as viral hepatitis and enteric fevers, are still a public health threat reflecting local endemicity patterns.

High coverage of UNRWA Primary Health Care services has a different meaning than the same finding in a Country. It is an expression of persistent/increasing economic vulnerability and/or limitation to health access that are making Palestine refugees more and more dependant on the Agency as their sole health care provider. There has been a dramatic increase in the coverage of UNRWA mother and child health services since 1990 (Figures 3-6) that tends to exceed coverage rates reported by host countries in particular in the Gaza Strip and Lebanon where the socio-economic conditions of Palestine Refugees are the harshest. Conversely within the oPts, coverage is lower in the West Bank, again underlining the difference between these refugee groups even though they both have full access to Palestinian National Authority health services.

Epidemiological overview

The reduction of communicable disease incidence combined with a longer life expectancy and modifications in life style have led to a change in the refugees' morbidity profile with the emergence of non-communicable diseases such as cardiovascular diseases, diabetes mellitus and cancer. The highest prevalence of diabetes mellitus among Palestine refugees above 40 was observed in the Gaza Strip reaching 12.7% and the highest prevalence of hypertension in Lebanon, 19.9 percent.

The global change in eating habits and lifestyles is also leading to higher caloric intakes and physical inactivity in Palestine refugees. However, this higher caloric intake is not associated with mitigation of existing nutritional deficiencies, which leads to a new and perhaps more unsettling kind of malnutrition, in which an excessive caloric intake, in the form of fat and carbohydrates, accompanies a persistent lack of micronutrients. Obesity is highly prevalent, reaching 53.7 percent in women in Jordan, while the lowest prevalence was found in Lebanon (men 23.6 percent, women 40.6 percent) [6]. Although data of surveys conducted in host countries is included for completeness, comparison of these prevalences could be misleading as not all studies were identically designed (Table 4).

Conversely, although severe under-nutrition as reported in the 1950s and 1960s is no longer highly prevalent, moderate stunting is still a problem among children under five in the oPt and in 2006 prevalence was placed at 12.4% in the Gaza Strip, as opposed to 7.9 percent in the West Bank. This highlights once again the difference between these two refugee groups [7]

Iron-deficiency anaemia and vitamin-A deficiency remain severe public-health problems among Palestine Refugees in the Near East. In Lebanon, the prevalence of anaemia among children under three years of age in 2004 was 33.4 percent, which makes it the highest in Palestine refugees who live outside the occupied Palestinian territory (28.4 percent in Jordan and 17.2 percent in Syria).

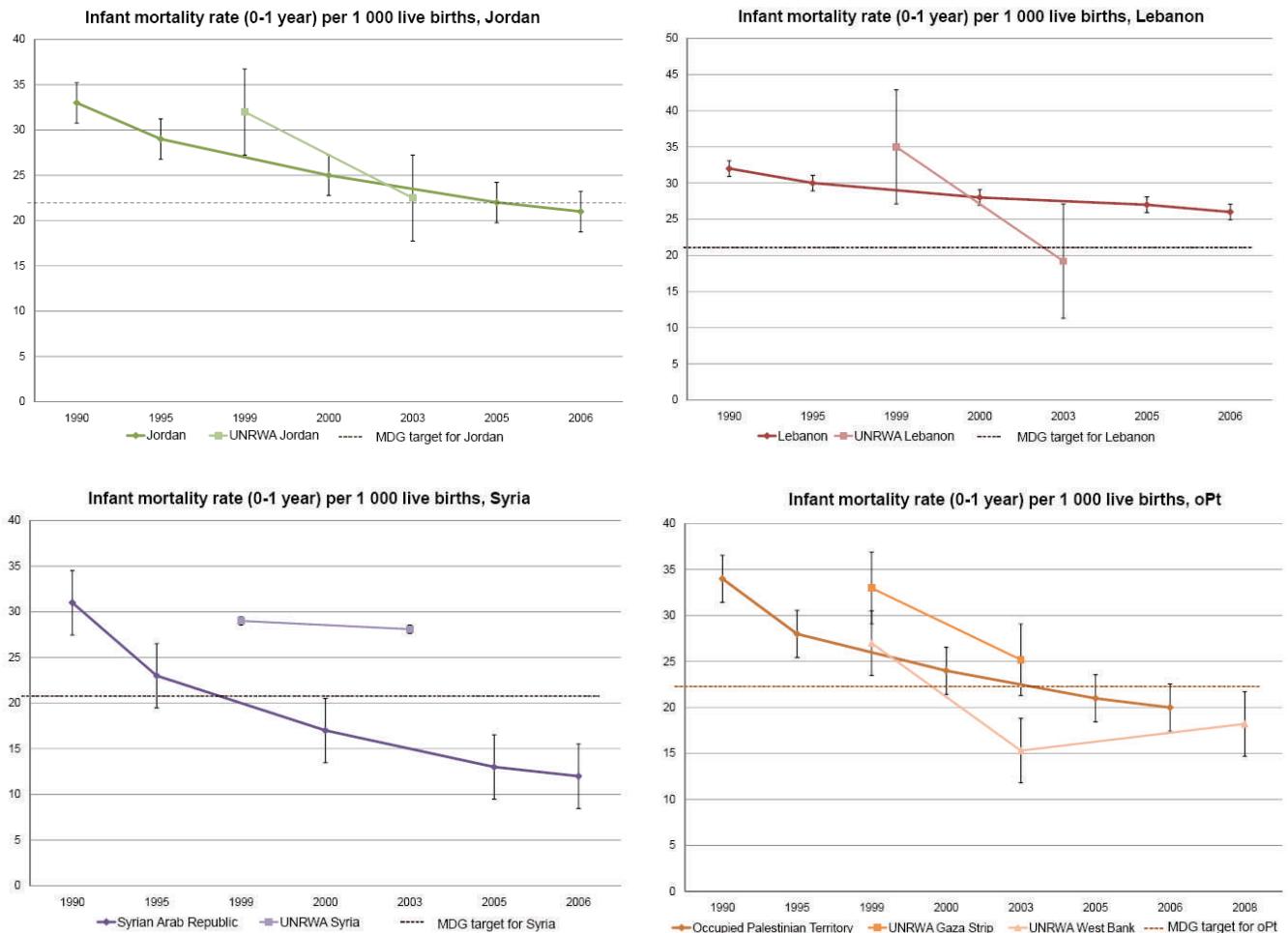


Figure 2 - Infant Mortality Rate by host country from 1990 to 2008. Country data [9], UNRWA data and MDG target (The Country data derives from the official UN MDG indicator website as per reference. This source was preferred over individual national statistical databases because where necessary data has been adjusted by the responsible specialized agencies to ensure international comparability, in compliance with their shared mandate to assess progress towards the MDGs at the regional and global levels.)

related deaths, that are the leading causes of infant mortality today.

In the same survey, the prevalence of anaemia in West Bank and the Gaza Strip was higher (34.3 percent and 54.7 percent, respectively) [6] and a pejorative trend was highlighted in both Fields in 2006 with a prevalence of 37.1 percent in the West Bank and 57.5 percent on the Gaza Strip [7].

Mental disorders, related to the chronically harsh living conditions and long-term political instability, violence, and uncertainty are becoming a public-health concern. In Lebanon, 19.5% of Palestine refugee adolescents suffer from mental distress and 30.4% of women in the same refugee camps reported mental distress [7].

Future directions

As an Agency working in a chronically unstable environment, UNRWA is continuously challenged to face crisis. The closure regime in the West Bank and conflicts in Lebanon and more recently in the Gaza Strip, have forced the health programme to react rapidly in order to ensure continuity of comprehensive primary health care delivery and to respond to new needs of refugees. It has led to the establishment of new services such as mental health to deal with the consequences of protracted violence and insecurity and physiotherapy/rehabilitation to assist those affected by permanent disability. It has also made the Health Programme strongly decentralized and able to adapt rapidly to limits imposed by logistic impediments and security concerns. This has limited the disruption of services like epidemiological surveillance and treatment of chronic diseases that suffer the most in times of conflict.

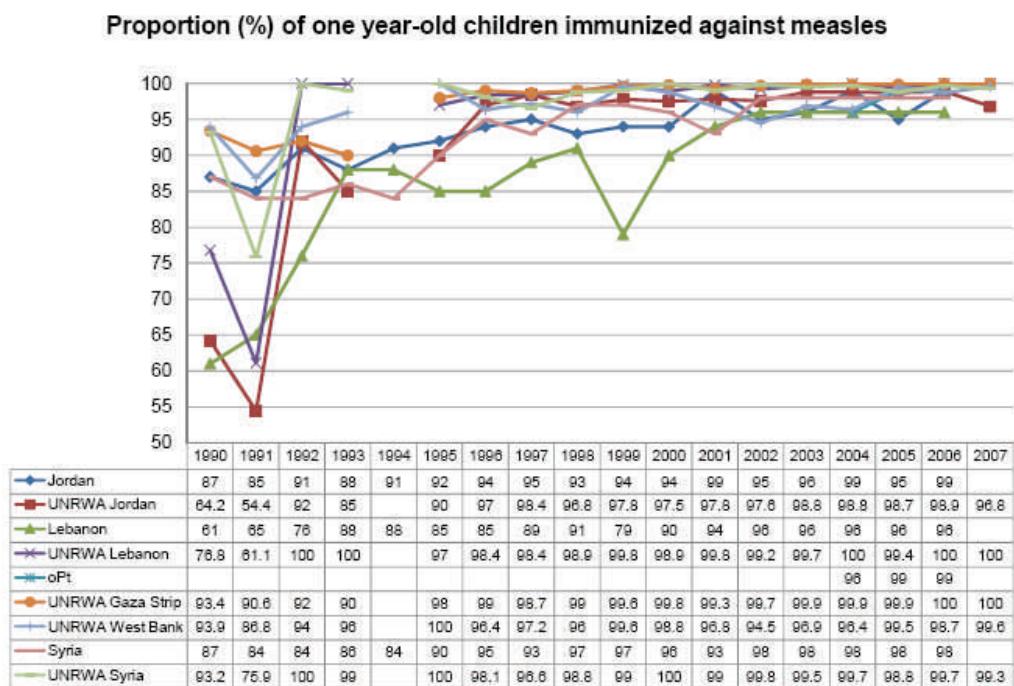


Figure 3 - Measles immunization coverage by host country from 1990 to 2007. Country data [10] and UNRWA data

The result of these management choices has been a limitation of the consequences of socio-economic hardship and conflict on the health of Palestine refugees. Although UNRWA beneficiaries remain an extremely vulnerable population, MDG, demographic indicators and epidemiological trends are still in line with those observed in the region. Exception to this are the worrisome signs arising from the Gaza Strip suggesting the need to specifically empower UNRWA's financial and logistic capacity in delivering health in this location.

Although not a State, UNRWA is holistically assisting a particularly vulnerable population providing not only health care but also a social safety net that encompasses education, food assistance, job creation programmes and micro credit schemes.

The main future challenge for UNRWA is sustainability. A combination of rapid population growth, increased demand for services, integration of new activities within primary health care and growing financial constraints, is overstressing UNRWA's Health Programme and

undermining its capacity to buffer the negative effects of poverty, food insecurity, unemployment, violence and social and institutional isolation on the health of its beneficiaries.

Table 2 - Demographic indicators by Field, 2008

Country/ served population	Year	Population 0-14 years (%)***	Fertility Rate**	Life expectancy at birth (years)*
Syria	2000-05	39.5	3.5	70.9
Syria (UNRWA)	2003-2008	29.9	2.4	NA
Jordan	2000-05	37.1	3.5	78.7
Jordan (UNRWA)	2003-2008	29.4	3.3	NA
Lebanon	2000-05	27.3	2.3	73.4
Lebanon (UNRWA)	2003-2008	22.5	2.3	NA
West Bank*	2008	38.0	3.3	74.3
West Bank (UNRWA)	2003-2008	31.4	3.1	NA
Gaza Strip*	2008	44.7	5.2	73.2
Gaza Strip (UNRWA)	2003-2008	38.5	4.6	NA
Israel	2000-05	28.4	2.9	80.6
Egypt*	2008	31.8	2.7	71.9

*source CIA fact-book , 2008 ** G.Sabatinelli, S. Pace-Shanklin, F.Riccardo, A.Khader Facing socio-economic decline: delivering health to Palestine Refugees. Babylon No 1, 2008 ***UNRWA Data is updated to 2008, host country are reported as published in the above mentioned paper.

Table 3 - Selected MDG indicators Palestine Refugees (UNRWA) and the general population (PNA), oPt

Reference MDG	Indicator	WEST BANK	WEST BANK	GAZA STRIP	GAZA STRIP
		UNRWA	PNA/WHO	UNRWA	PNA/WHO
MDG 4 <i>Reduce child mortality</i>	<i>Infant mortality rate/1000</i>	15.3	23.2	25.2	29.0
	<i>% infants 12 months immunized against measles</i>	99.6	95.1	100	99.2
MDG 5 <i>Improve maternal Health</i>	<i>Antenatal care coverage</i>	73.1	98.7	100	99.0
	<i>% of deliveries attended by skilled health personnel</i>	99.5	98.2	100	99.3
MDG 6 <i>Combat HIV, Malaria, TB and other diseases</i>	<i>Maternal mortality ratio/ 100000 births</i>	8.2[#]	6.7	37.5[#]	21.3
	<i>Contraceptive use among married women in reproductive age</i>	56.3	NA	33.7	NA
MDG 7 <i>Environmental sustainability</i>	<i>Prevalence rate of TB/ 100000</i>	0.4[#]	NA	2.0[#]	NA
	<i>% population with sustainable access to an improved source of water^{##}</i>	100	91.9	100	97.3
	<i>% population with access to improved sanitation^{##}</i>	63	99.2	84	99.7

This table presents the latest data available for selected MDG indicators in the oPt stratifying the information by territory. UNRWA data refers to 2007 all PNA data[11] refers to 2005-2006. [#] data on maternal mortality and tuberculosis prevalence reflects only beneficiaries attending UNRWA services. ^{##} These indicators are collected by UNRWA as the % of camp shelters with access to safe water and sewerage facilities.

Antenatal care coverage (at least one visit and at least four visits)

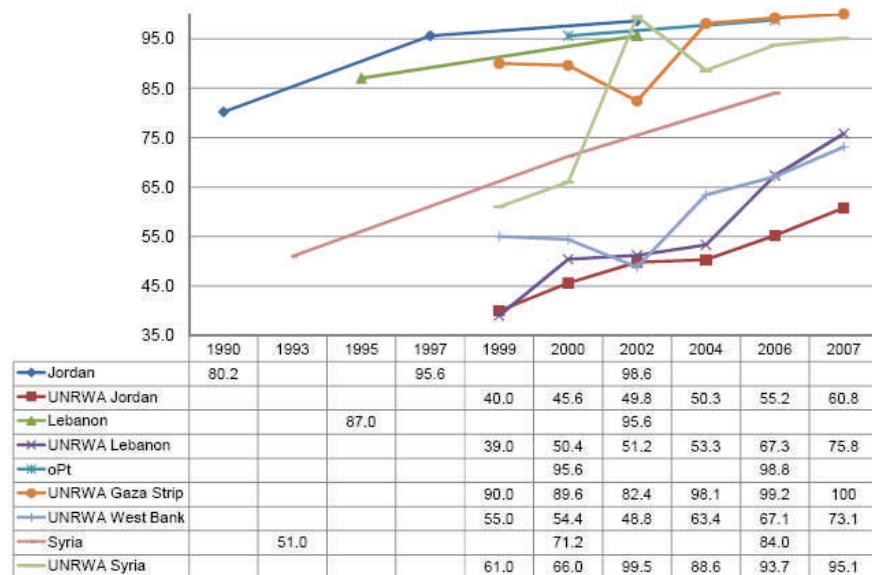


Figure 4 - Antenatal care coverage by host country from 1990 to 2007. Country data [12] and UNRWA data (UNRWA data refers to the coverage of antenatal care calculated as the number of newly registered pregnant women in a given year / expected number of pregnancies - registered refugees x crude birth rate).

Proportion (%) of births attended by skilled health personnel

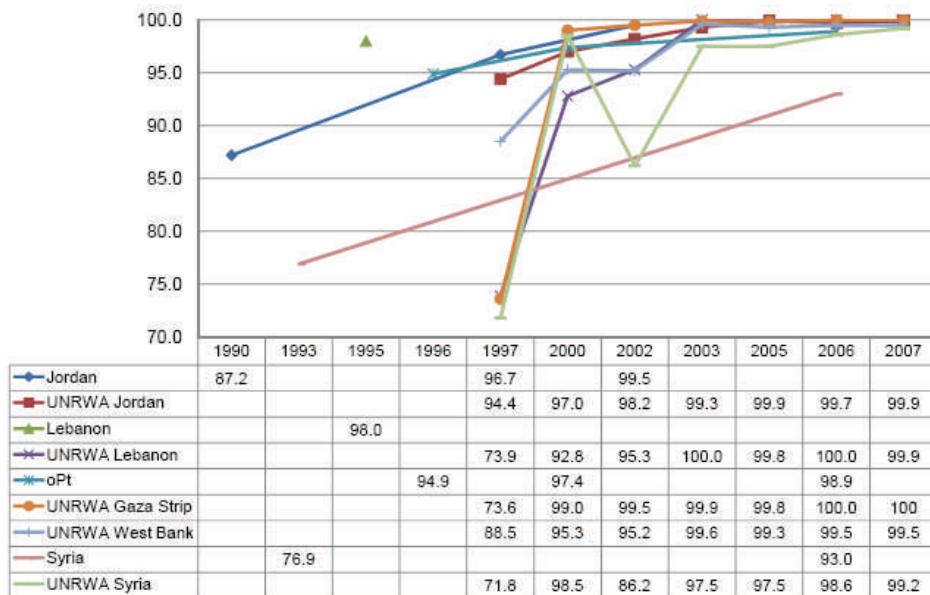


Figure 5 - Proportion of assisted deliveries by host country from 1990 to 2007. Country data [13] and UNRWA data

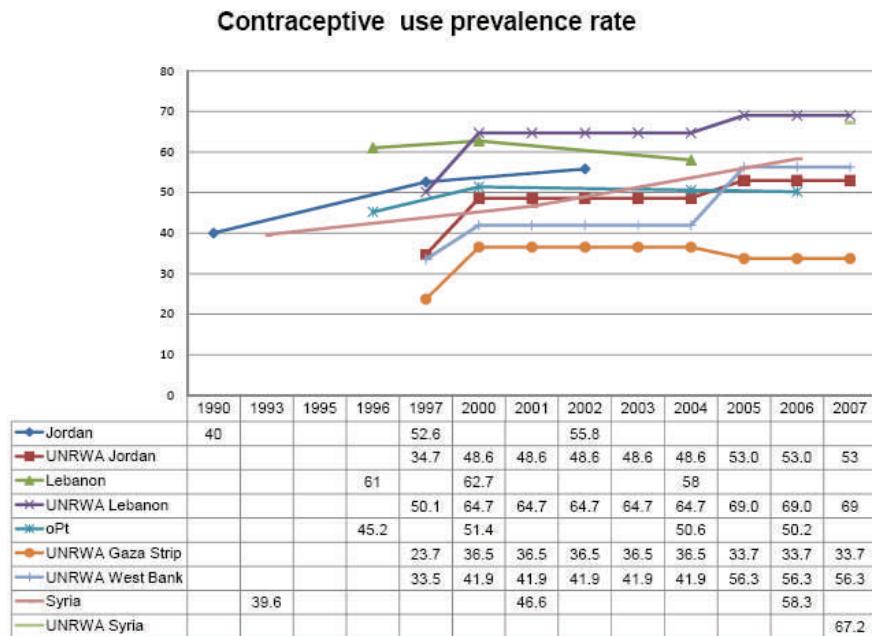


Figure 6 - Use of contraceptives by host country from 1990 to 2007. Country data [14] and UNRWA data

Table 4 - Prevalence of obesity ($BMI \geq 30$) in the hosting countries and EMR region and detection rates UNRWA [15]

Country\Territory	Males (%)	Females (%)	Source
Jordan	10.3	16.2	2002 National survey >18 yrs
Jordan Field*	32.7	53.7	UNRWA 2007
Lebanon	14.3	18.8	1997 National survey >20 yrs
Lebanon Field*	22.4	38.7	UNRWA 2007
Gaza Strip – West Bank	30	50	2003 survey Birzeit University
Gaza Field*	34.1	41.6	UNRWA 2007
WB Field*	28.7	52.6	UNRWA 2007
Syria	28.8	46.4	2006 Aleppo survey (sub national)
Syria Field*	25	42.7	UNRWA 2007
Israel	19.8	25.4	2001 National Survey
EMR	30-60	35-75	EMJ 2004 10(6)

*data refers only to the Palestinian refugees screened for NCD at UNRWA health centres

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Curative Medical Care Services

The Health Programme is extraordinary in many senses. It is a unique service delivery system, established against formidable obstacles over many decades marked by severe, recurrent turmoil. It serves a unique population, and is uniquely dependent on donor support. It is staffed by loyal, committed and frequently life-long workers, who largely belong to the refugee population.

E.Pavignani External Evaluation of the UNRWA Health Programme, 2008

Programme Goal

The objective of the Curative Medical Care Services Programme is to reduce morbidity and mortality from acute and chronic illnesses by providing diagnostic and curative services to Palestine refugees through UNRWA's network of primary health care facilities and contracted government hospitals or institutions.

Programme profile

Curative Medical Care Services are an integral part of UNRWA's comprehensive primary health care activities, where the physical, human and financial resources allocated to this programme are shared with, and complement, disease control and health prevention and promotion activities. The specific activities of this programme consist of out-patient medical care, dispensation of drugs, laboratory investigations, radiology services, oral health services, physical rehabilitation and hospital care. Services at the primary level are provided to the served population free-of-charge, and policies for cost sharing are in place with respect to hospital services and other outsourced services such as advanced medical investigations and prostheses.

Medical care services are provided through a network of 137 primary health care facilities Agency-wide. Of these facilities, five health centres located in the largest camps in Gaza are operated on a double-shift. Introduced 15 years ago, this unique arrangement was maintained because of the Agency's inability to establish additional health care facilities that would help to reduce excessive workloads resulting from rapid population growth, increased demand for services and integration of new activities within the Agency's primary health care offer.

Owing to their critical socio-economic conditions, subgroups of Palestine refugees that technically do not fall under the UNRWA mandate were accepted as beneficiaries of the Agency's Health Programme. These include almost 24,000 Palestine refugees displaced from Gaza since 1967 in Jordan and almost 13,000 Palestine refugees who are on the official records of the Lebanese authorities, but are not registered with UNRWA in Lebanon. Likewise, Bedouin tribes who took refuge in Syria since 1948 and were not previously registered with UNRWA have been

included in Agency records. Data in this chapter does not include Palestine refugees fleeing Iraq assisted by UNRWA in collaboration with UNHCR in Syria, as their situation is discussed in chapter six of this report.

Progress in 2008

Out-patient care

Utilization trends

Utilization of out-patient services in 2008 was higher than that in 2007 with approximately 9.9 million medical consultations compared to 9.5 million in 2007. Of these consultations 282 869 were specialist consultations (see Table 1).

In the UNRWA system, out patient consultations are classified in two groups: first and repeat visits. First visits occur when an individual or family file is activated at the start of each solar year. All other visits are considered repeat visits. Therefore there is no relationship between the definition of a visit according to UNRWA as first or repeat and the reason why the patient accesses the clinic in the first place. In the case of the family files, used for general out patient clinics, it is sufficient that one member of the family activates the file once for the whole family to have repeat visits for

the remaining year. Table 1 shows a stratification of medical consultations as first and repeat visits based on this system. The ratio of repeat to first visits decreased from 4.0 in 2007 to 3.6 in 2008. This ratio has a very wide variation among Fields, and among health centres in the same Field. The highest ratio was in Lebanon, 4.4 and the lowest was in Syria 2.6.

In 2008 a study, named "Repeat Visit Study, was conducted in all UNRWA Fields to understand the dynamics of patient access to UNRWA health centres introducing a clinical and not administrative based classification of out-patient consultations. The Repeat Visit Study has classified follow-up visits and visits for new disease episodes according to the diagnosis and time between diagnosis among individual patients. Although a full report will be finalized in 2009, preliminary findings indicate that patients receive on average between 6.5 and 8.9 consultations per year according to Field, excluding routine check ups for chronic conditions. This is consistent with the general picture we gather from previous studies that depict an overstretched system, with a very limited doctor/patient contact time. Most patients attend UNRWA Health Centres for new disease episodes, and follow-up visits are only 5% to 31% of consultations with variations according to the Fields and the curative services that the patients access.

Table 1 - Utilization of outpatient services in 2008

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Registered refugees	1 951 603	422 188	461 897	1 073 303	762 820	4 671 811
a. Medical consultations						
First visits	479 863	178 383	276 902	805,647	347 397	2 088 192
Repeat visits	1 763 649	790 206	713 100	2 899 398	1 359 813	7 526 166
Ratio of repeat to first visits	3.7	4.4	2.6	3.6	3.9	3.6
Sub-total	2 243 512	968 589	990 002	3 705 045	1 707 210	9 614 358
b. Specialist care						
Obs/Gyn	51 669	19 720	12 808	86 742	8 188	179,127
Cardiology	5 843	9 990	397	15 861	3 012	35,103
Others	5 250	16 300	47	40 939	6 103	68,629
Sub-total	62 762	46 010	13 252	143 542	17 303	282 869
Total	2 306 274	1 014 599	1 003 254*	3 848 587**	1 724 513	9 897 227

*Data includes 5990 medical consultations utilized by Refugee women married to non-refugee men (MNR) **Data includes 304,119 medical consultations utilized by MNR.

Staff workloads

In 2008 the workloads at UNRWA health centres was higher than that in 2007 with an average of 101 medical consultations per doctor per day, compared to an average of 96 in 2007. The highest workload continued to be reported from Syria with 113 medical consultations per doctor per day, however this is calculated on only five work days a week due to this Field specific Health Centre opening days. The lowest work load of 89 was reported from the West Bank (Figure 1).

In-patient hospital care

Demographic profile of hospitalized patients

Analysis of the age distribution of patients hospitalized during 2008 reveals that 19.4% were children below 15 years of age (Table 2). The majority of hospitalized patients are between 15 and 44 years of age.

Almost 67% of hospitalized patients were women, with the highest rate in Jordan (87.5%) and the lowest in the Gaza Strip (43.8%). This variation is the result of the pattern of resource allocations and the different referral and reimbursement policies in each Field (Table 3).



Wards of admission

Table 4 shows the wards of admittance by Field. There is significant variation between Fields, with a predominance of surgical cases reimbursed by UNRWA in Syria and the Gaza Strip, internal medicine cases in Lebanon and the West Bank whilst deliveries are the main cases reimbursed by the Agency in Jordan. Similar to distribution by sex, these variations are not related to major differences in the prevailing morbidity patterns, but are rather due to implementation of different referral policies and to the level of Agency assistance provided in each Field.

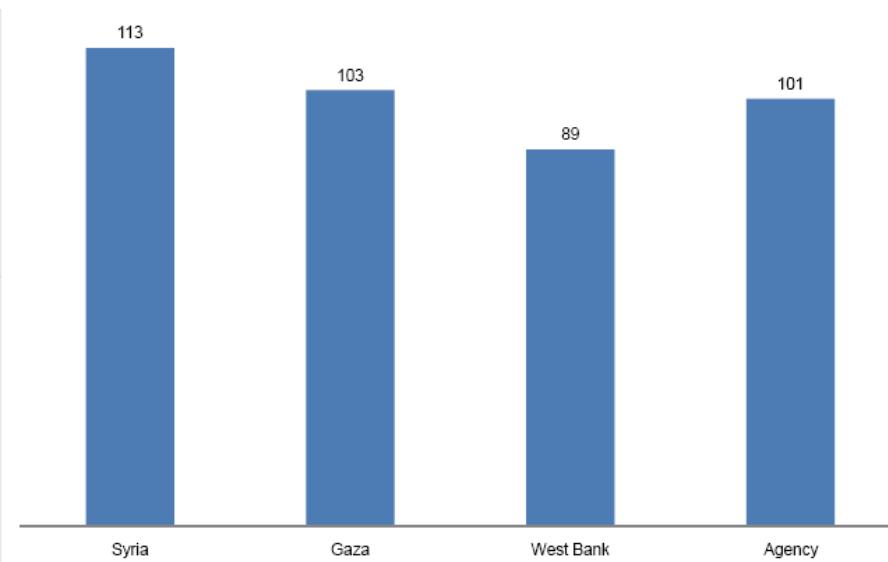


Figure 1 - Average daily consultations per doctor (the Average Daily Medical Consultations in Syria Field is calculated based on 5 working days in a week).

Outsourced hospital services

UNRWA continued to provide assistance towards essential hospital services either by contracting beds at non-governmental and private hospitals or through partial reimbursement of costs incurred by refugees on their treatment at governmental or non-governmental hospitals.

Data on utilization of hospital services in 2008 is shown in Table 5.

Table 2 - Age distribution of hospitalized patients in 2008

Field	No. of hospitalized pa-tients	Age group (years) in %				All age groups
		0-4	5-14	15-44	45+	
Jordan	22 917	2.1	4.9	84.5	8.6	100
Lebanon	20 978	16.9	12.2	40.6	30.3	100
Syria	11 012	7.0	7.8	68.6	16.6	100
Gaza Strip	4 763	5.6	19.7	41.6	33.0	100
West Bank*	24 751	16.6	6.8	54.2	22.4	100
All Fields	84 421	10.9	8.5	60.1	20.5	100

*Data includes all hospitalized patients (both coming from the UNRWA managed Qalqilia Hospital and outsourced hospitals in host countries)

Table 3 - Distribution of hospitalized patients by sex in 2008

Field	No. of hospitalized patients	Sex	
		Male %	Female %
Jordan	22 917	12.5	87.5
Lebanon	20 978	46.3	53.7
Syria	11 012	44.1	55.9
Gaza Strip	4 763	56.1	43.9
West Bank	24 751	31.8	68.2
All Fields	84 421	33.1	66.9

Table 4 - Distribution of hospitalized patients by ward of admission in 2008

Field	No. of hospitalized patients	Surgery %	Internal Medicine %	Otolaryngology %	Ophthalmology %	Obstetrics %
Jordan	22 917	17.6	16.3	0.7	0.4	64.9
Lebanon	20 978	23.1	59.6	4.1	1.3	11.9
Syria	11 012	53.52	9.96	8.50	9.17	18.84
Gaza Strip	4 763	84.7	14.7	0.00	0.3	0.4
West Bank	24 751	20.4	43.9	1.2	2.0	32.5
Total	84 421	28.3	34.2	2.7	2.2	32.6

Table 5 - Distribution of hospitalized patients in 2008

Indicators	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Total
Patients hospitalized	22 917	20 978	11 012	4 763	18 725	78 395
Difference in % from 2007	83.9	- 0.6	1.1	18.8	1.6	16.1
Patients days	45 669	47 211	12 637	16 392	42 315	164.224
Average stay in days	2.0	2.2	1.2	3.4	2.3	2.1

Utilization trends vary significantly between one field and another. This variation is mainly due to the pattern of resource allocations and reimbursement policies implemented in each Field. The number of patients who benefited from hospital services Agency-wide, excluding the UNRWA managed Qalqilia Hospital, increased from 67 510 in 2007 to 78 395 patients in 2008. This represents an increase of 16.1% Agency-wide. There was a significant increase in Jordan this year due in part to the delayed settlement of some 2007 hospital claims that were received in 2008 and in part to the newly established contracted hospital services with the Jordanian MoH that has increased patient access.

The average length of stay was almost identical to the average length stay in 2007 with an average of 2.1 days Agency-wide.

The UNRWA managed Qalqilia Hospital

In addition to outsourced services, hospital care to Palestine refugees is provided by an UNRWA managed 63-bed hospital in Qalqilia, West Bank. Qalqilia Hospital accommodates 14 surgical, 12 medical, 20 paediatric, 15 obstetric/gynaecologic and two intensive care beds in addition to a five-bed emergency ward.

The average daily bed occupancy in Qalqilia Hospital during 2008 was 53.3%, a slight decrease from the previous year (55.6%). A total of 6 026 people were admitted to the hospital, this number includes UNRWA refugees and non refugees from the municipalities.

Tables 6 and 7 provide data on utilization of Qalqilia Hospital in the West Bank and shows the changes in the utilization of the hospital since 2004.

Table 6 - In-patient care at the UNRWA hospital (Qalqilia, West Bank) in 2008

Indicators	
Number of beds	63
Persons admitted	6 026
Bed days utilized	12 263
Average daily bed occupancy	53.3%
Average stay in days	2.0

Table 7 - In-patients admitted by category in 2004-2008

	2004	2005	2006	2007	2008
Refugees	4351	4901	5649	5470	5348
Municipality-referred Poor Patients	229	319	611	377	326
Married to Non Refugees	Non existing category	Non existing category	57	227	18
Non Refugee Emergency Cases	150	124	260	433	372
Total Non Refugees	379	443	928	1037	716
Total Admissions	4794	5406	6657	6545	6026

*Total admissions also include UNRWA employees and Intifada patients. The figures for these groups are not included above; this is the reason why the number of Total Admissions is not equal to the sum of the categories above

Laboratory services

The aim of the UNRWA health programme is to integrate laboratory services within UNRWA's primary health care centres. In 2008, new laboratories were established in two health facilities in the West Bank and in one in Lebanon and the Gaza Strip. This increased the number of laboratories providing comprehensive laboratory services* to 119. The remaining 18 facilities, 12 in Lebanon, two in Syria, three in Gaza and one in the West Bank, continued to provide basic laboratory support (i.e. testing for blood glucose, blood haemoglobin and urine tests by dipstick) through competent nursing staff using basic laboratory equipment. Figure 2, shows the number of UNRWA laboratories in the five Fields from 1998 to 2008.



Utilization trends

The number of tests performed increased by 7.4% Agency-wide in 2008 compared with 2007. The rates of increase were 10.9% in Gaza, 10.2% in Lebanon, 8.4% in Syria, 4.9% in Jordan and 2.0% in the West Bank. This increased utilization of laboratory services is consistent with the expected population growth and demand. Figure 3 shows the trend in utilization of laboratory services during the period 1998-2008.

Bacteriology services

In order to meet the approved plan of activities to expand bacteriology services to Area level, three additional health centre laboratories started providing bacteriology services during 2008 in Jarash, Jabal Al Hussein and Marka Health Centres in Jordan. This increased the number of laboratories providing this service from 26 in 2007 to 29 in 2008. Arrangements were also made for the referral of patients or samples to those laboratories to ensure a rational utilization of this service.

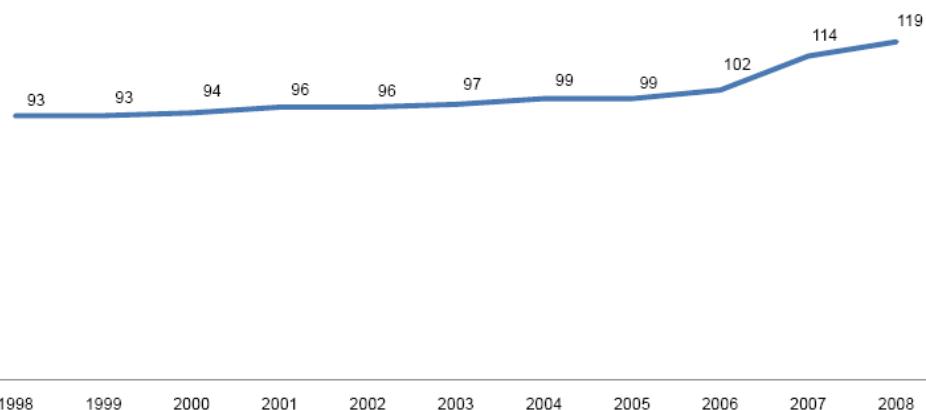


Figure 2 - Number of laboratories integrated within UNRWA health facilities

* Comprehensive laboratory services include: chemistry, haematology, serology and urine/stool direct microscopy.

The number of bacteriology tests performed increased by 9.3% Agency-wide in 2008 compared with 2007. The rates of increase were 36.5% in Lebanon, 19.7% in Syria, 14.7% in Jordan, 2.0% in Gaza and 1.7% in the West Bank. This increased utilization of bacteriology services is mainly attributed to improved referral practices (patients and samples).

Periodic self-evaluation

A comparative study of workloads and efficiency of the laboratory services was carried out based on the 2008 statistical data as part of UNRWA's periodic self-evaluation of the programmes. The WHO approach for workload measurement was used [1].

Table 8 shows the actual productivity in Work Load Units (WLUs)/hour during the period 2001-2008. The productivity target of 45 to 55 WLUs/hour was almost achieved or exceeded in Jordan, Gaza and the West Bank Fields, while it was below target in Syria and Lebanon.

The highest ratio of productivity continued to be reported in Gaza Strip (78 WLUs/hour) and West Bank (almost 60 WLUs/hour). This is due to the limited number of available laboratory technicians. The

recruitment of 14 laboratory technicians in the Gaza strip and of 24 in the West Bank under the UNRWA Job Creation Programme was necessary to compensate for the deficit in the number of staff and the increasing demand of laboratory services.

The low productivity in the Syria and Lebanon Fields is mainly attributed to the fact that UNRWA facilities in these Fields work five instead of six days a week with longer daily working hours.

This suggests that the extra 1.25 hours a day in these Fields do not compensate for the day not worked in terms of efficiency.

Automated haematology analyzers were introduced in all laboratories in Lebanon, Gaza Strip and the West Bank, in most of laboratories (18 out of 22) in Jordan and in six laboratories in Syria.

Automated chemistry analyzers were introduced at area level in all Fields (six in Lebanon, six in the Gaza Strip, eight in the West Bank, five in Jordan and three in Syria). This technology reduced the reagent consumption by 1/5 of the volume needed for manual testing and replaced the previously adopted time-consuming manual procedures.

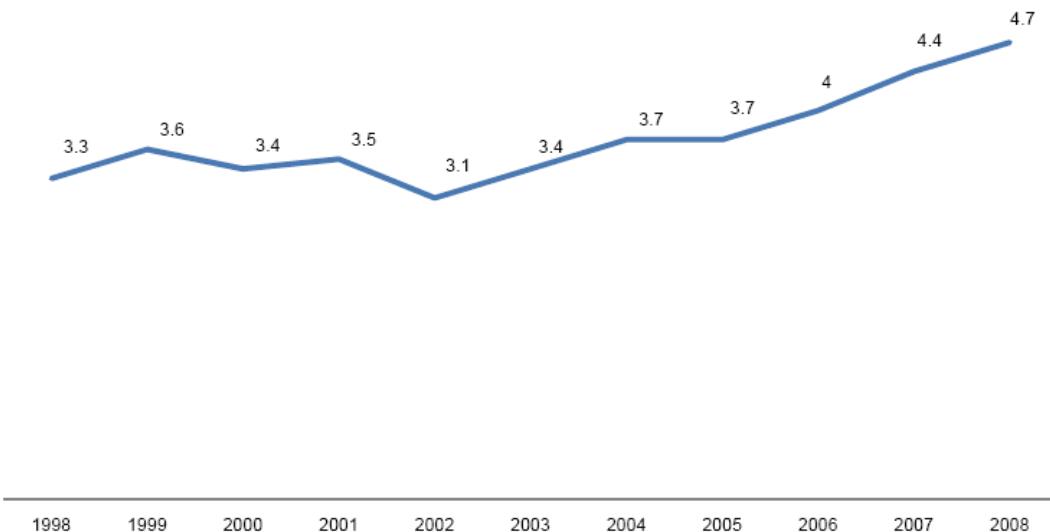


Figure 3 - Trend in utilization of laboratory services (million of tests)

Cost efficiency

The cost of laboratory services provided by UNRWA continued to be far below the public rates for equivalent services. This suggests that UNRWA's experience in integrating laboratory services into its primary health care activities remains very cost-efficient vis a vis referring patients to external services (Table 9).

The cost of laboratory supplies procured under UNRWA's General Fund through the cyclic review indents for the year 2008 amounted to US\$ 942 060 (see Table 10). Procurement of these supplies enabled the smooth running of laboratory services, hence no stock ruptures were observed against laboratory supplies and reagents during the year.

34% of required laboratory equipment for 2008 was procured through general funds and 66% through emergency funds, project funds and/or donations amounting to US\$ 211 949 and US\$ 421 429 respectively (Figure 5).

In 2008, UNRWA continued to monitor on the performance of laboratory personnel and on the proper provision and utilization of laboratory services. The following activities were conducted:

- Training courses for all laboratory technicians and in-service training (according to a standard training package) for newly recruited technicians were conducted in all Fields;

Table 8 - Productivity (WLUs/hr) of laboratory services by Field, 2001-2008

Year	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
2001	43.3	58.4	60.0	66.3	48.7	55.3
2002	50.8	55.0	47.1	72.3	47.2	53.0
2003	54.2	49.0	47.9	76.6	58.4	58.7
2004	58.5	49.9	49.4	65.7	56.6	55.9
2005	59.9	41.7	49.4	67.0	36.6	50.8
2006	58.6	42.7	46.1	66.4	51.4	52.7
2007	50.2	44.6	42.0	77.1	44.0	54.2
2008	50.3	42.5	43.0	78.0	59.3	56.4

Table 9 - Comparative analysis on annual cost of laboratory services performed at UNRWA facilities and cost of same services if outsourced to Host Governments (US\$)

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Public Cost	3 305 748	1 401 946	1 124 757	4 793 005	2 427 007	13 052 463
UNRWA Cost	962 770	520 668	440 681	881 059	953 223	3 758 401

Table 10 - Expenditure on laboratory supplies and equipment in 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Laboratory supplies	162 910	128 593	121 508	248 792	280 924	942 727
Equipment	253 122	59 124	48 718	156 262	116 152	663 378

- Special training on the use and preventive maintenance of the Automated Chemistry Analyzer from Awareness Technology, USA, was organized by Awareness Technology Middle East Office in Dubai, United Arab Emirates for the Head of Laboratory and Medical Diagnostic Services from HQ, Amman and the Field Laboratory Services Officer from Jordan Field;
- The quality of laboratory services was monitored on a daily basis through an internal quality control system in place in all laboratories, and a through semestral evaluation of the laboratory testing procedures which included pre-analysis, analysis and post-analysis phases using a pre-prepared control sample;
- UNRWA laboratories in the West Bank continued to participate in the external quality control programme;
- An annual assessment of the trends in utilization and productivity of laboratory services at health centre level was conducted in each Field;
- The quality of laboratory supplies was checked on a regular basis in coordination with concerned staff in the procurement division;
- Complementing the review of supplies, a set of generic standard specifications for all laboratory equipment was prepared and distributed to

laboratory technicians; and

- Arrangements were made with the public health laboratories of the host countries for the referral of patients or samples for the laboratory confirmation of communicable diseases of public health importance.

The following tests were performed in UNRWA laboratories in 2008:

- 113 612 stool examinations;
- 97 003 haemoglobin (Hb) tests to screen one year old children for anaemia;
- 106 885 and 87 102 Hb tests to screen pregnant women at registration and at 24 weeks of gestation respectively for anaemia;
- 171 800 Fasting Plasma Glucose tests to screen 102,145 pregnant women at registration and at 24 weeks of gestational diabetes;
- 91 711 Urine Nitrite tests to screen 102,145 pregnant women for urinary tract infections;
- 387 808 postprandial plasma glucose tests as follow-up tests for diabetic patients;

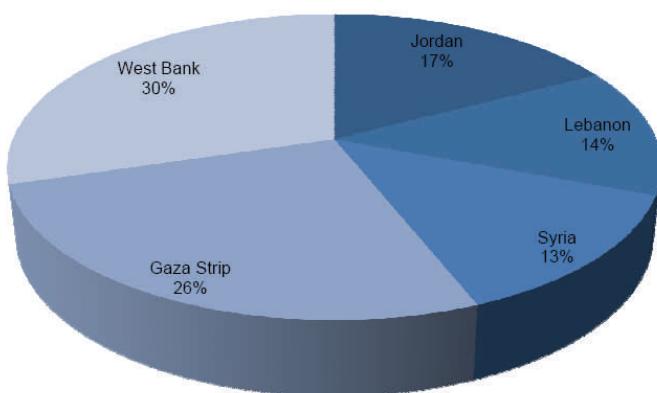


Figure 4 - Proportional expenditure on laboratory supplies

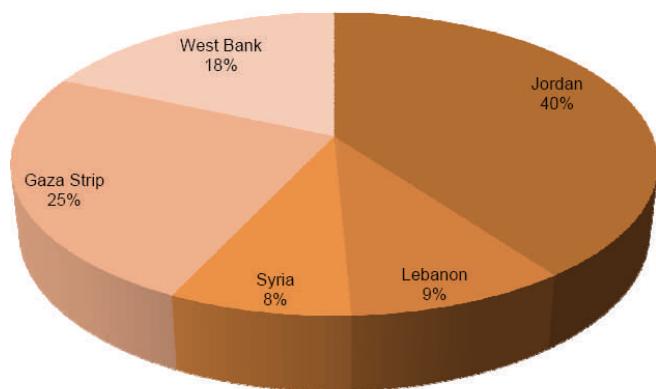


Figure 5 - Proportional expenditure on laboratory equipment

- 97 005 plasma glucose tests to screen individuals at 40 years of age and over and other groups at risk, for diabetes mellitus to increase diabetes detection rates; and
- 204 309 creatinine tests were performed to screen diabetic patients for nephropathy and 162,789 cholesterol tests to screen them for hypercholesterolemia.

Oral health services

Oral health services were expanded in 2008 to reach a total of 104 fixed and 11 mobile clinics. This increased the number of health facilities providing dental services from 111 to 115.

Analysis of the trends of utilization of dental services in 2008, as shown in Table 11, revealed that there was a 3% increase in dental consultations and an 16% increase in screening activities compared to 2007. The highest daily workload was reported in the Gaza Strip where it increased from 57.0 consultations per day in 2007 to 62.4 in 2008. Considering all the Fields, the average workload increased from 32 consultations in 2007 to 38 per dental surgeon in 2008.

The steady increase in the number of dental consultations over the last eleven years is shown in Figure 7.

An assessment of workloads, productivity and efficiency of oral health services was conducted in the five Fields. The assessment, based on a standardized protocol, was carried out as part of the periodic evaluation of system performance and is used to identify staffing requirements and the need for re-organization of services.

A comparative analysis between 2007 and 2008 of productivity ratios in relation to the defined target of 50 workload units per hour is shown in Figure 8.

The acceptable average actual productivity per Dental Surgeon per hour (45-55 WLUs/hr.) was achieved or exceeded in all Fields, Gaza Strip continued to report the highest workload (91.4

WLUs/h). This is explained to current understaffing in this Field.

The expenditure on dental equipment during 2008 amounted to US\$ 530,626, out of which \$ 215,821 (41%) were secured through general funds whereas \$ 314,805 (59%) through emergency funds, project funds and/or donations.

Table 12 below shows a comparative analysis on annual cost of oral health services at UNRWA and in the public sector.

In May 2008 Cooperazione Odontoiatrica Internazionale - COI (International Dental Cooperation), an Italian NGO, upon the request of the Director of the Health Programme, conducted an evaluation of the UNRWA Oral Health Services in Jordan, Lebanon and Syria to assess current policies and practices and identify future strategies for the provision of care.



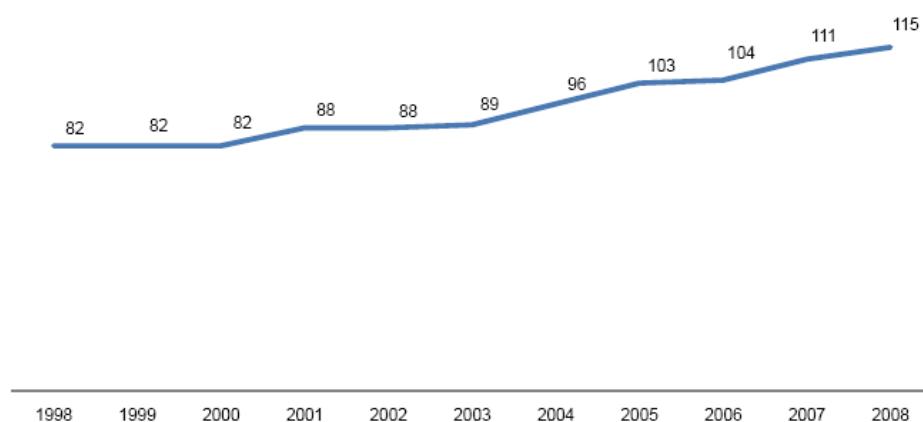


Figure 6 - Number of dental clinics, 1998-2008

Table 11 - Utilization of dental services in 2008

Indicator	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Dental consultations 2007	187 434	85 332	96 895	239 662	128 278	737 601
Dental consultations 2008	193 254	76 421	100 347	268 222	122 430	760 674
Dental screening 2007	55 310	28 563	44 283	95 639	27 797	251 592
Dental screening 2008	57 251	16 919	48 253	105 330	19 020	246 758
Daily Dental surgeon workloads	32.4	37.0	33.1	62.4	27.0	38.4

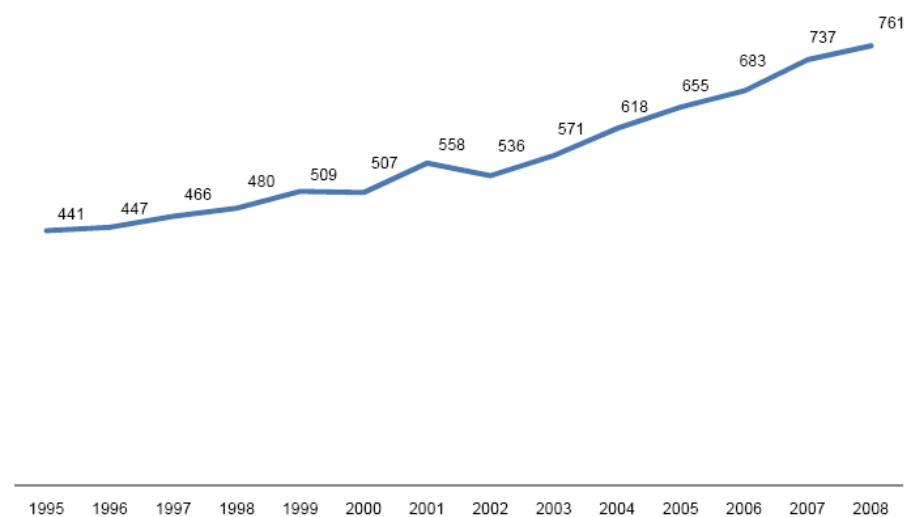


Figure 7 - Trend in utilization of dental services (number of dental consultations in thousands)

The following are the main topics addressed by the evaluation team and relevant recommendations:

To improve service organization (preventive and curative):

- Include oral health education in the already existing network between Mother and Child Health (MCH) staff and families;
- Produce educational material;
- Enforce technical instructions for the sale of food in school canteens;
- Revise the strategy for the application of sealants;
- Apply sealants to children upon their first admission in school and during 2nd grade and
- Use glass-ionomer instead of resin-based materials;
- Refer children directly to Dental Clinics upon admission to UNRWA schools;
- Check and record the water concentration of fluoride in camps;
- Conduct campaigns to encourage the practice of brushing teeth with fluoride tooth-paste during school breaks;
- Introduce screening for dental decay among three-year-old children; and
- Reconsider the policy of providing root canal treatment.

To balance between curative and preventive approaches:

- Revise treatment priorities to allow more resources for community dentistry.
- Provide training and links to scientific publications on community dentistry to all concerned staff.

To improve Cross Infection control:

- Revise and update Technical Instructions on infection control procedures.
- Increase time between patients up to minimum of five minutes for a proper room and surface disinfection, replacement of disposable items (spray syringes with a disposable extremity) and

change of hand pieces (turbines and micro-motors);

- Increase the stock of hand pieces) in each Dental Clinic to allow one to be used while another is being disinfected;
- Cover handles and lamps with a disposable plastic film;
- Improve storage of sterilized instruments to avoid recontamination; and
- Provide training and supervision on Cross Infection Control management.

To promote epidemiological research:

- Simplify and standardize survey methodologies according to WHO guidelines; and
- Reduce interval time between surveys to one every four years, considering that oral disease can undergo rapid changes in prevalence.

Medical supplies

The total value of medical supplies and equipment from all funds (regular funds, in-kind contributions and emergency appeals) in 2008 was approximately US\$ 21.23 million, representing an increase of 30% from 2007. The reasons for the increase in total expenditure (US\$ 4.97 million) is mainly due to two factors:

1. Value of in-kind and cash donation increased from US\$ 4.43 million in 2007 to US\$ 6.53 million in 2008 (US\$ 2.1 million)
2. The prices of many medical supplies increased, which created a deficit in funds (US\$ 1.5 million). The only way to cover this deficit was by transferring funds from other account codes. This has made the maintenance of the current level of services at UNRWA Health Centres possible throughout 2008.

The total amount spent from the UNRWA General Fund was approximately US\$14.7 million (69%), while the total value of in-kind and emergency funds spent was approximately US\$ 6.53 million (31%). Medical supplies and equipment represented approximately 38% of the total expenditure on medical care services (Figure 9).

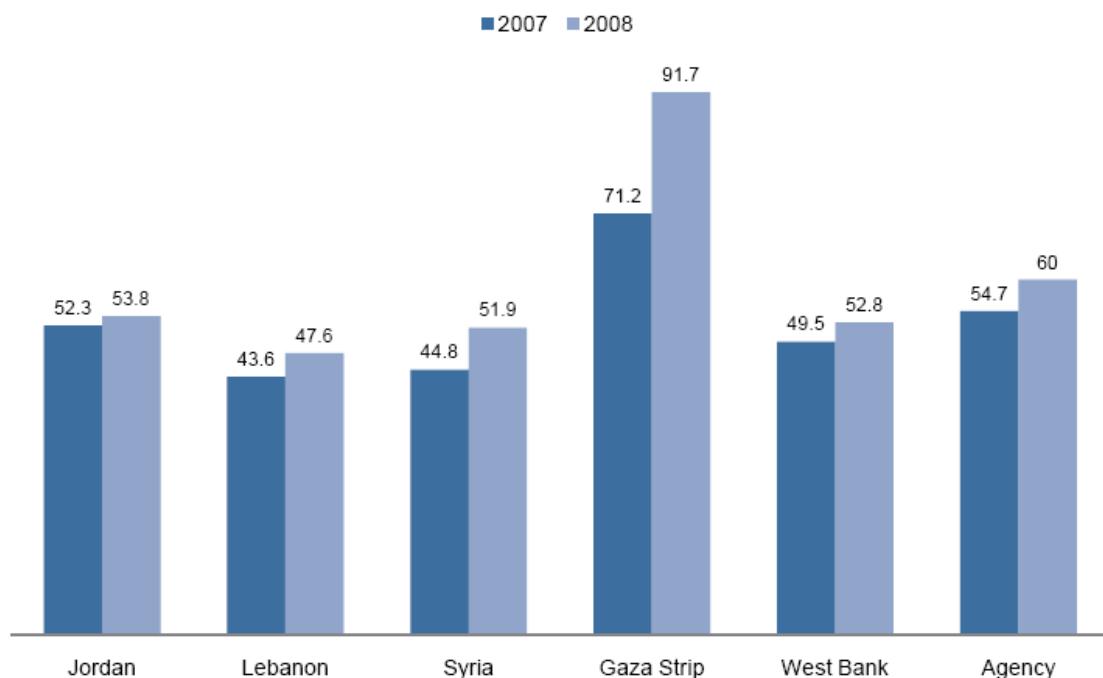


Figure 8 - Productivity of dental services by Field 2007-2008

Table 12 - Comparative analysis on annual cost of Oral Health services performed at UNRWA facilities and cost of same services if outsourced to Host Governments (US\$)

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Public Cost	2 876 400	2 250 730	1 156 222	5 332 460	3 219 836	14 835 648
UNRWA Cost	917 187	535 799	378 925	1 171 493	615 382	3 618 786



Expenditure by Field **

The annual UNRWA assessment of medical supplies utilization for the year 2008 revealed that the Gaza Strip was the Field with the highest expenditure at US\$6.94 million (35%), followed by Jordan at US\$5.4 million (28%), West Bank at US\$3.2 million (16%) and Lebanon at US\$2.53 million (13%). The lowest was Syria US\$1.54 million (8%) (Figure 10). The difference among Fields is partly due to the different size of the population served, where Jordan and the Gaza Strip have the highest number of served refugees and on the donations received in 2008, that were particularly generous for the Gaza Strip.

Average expenditure on medical supplies per outpatient medical consultation was US\$1.98, Agency-wide (Figure 11). The highest rate per medical consultation was recorded in Lebanon (US\$2.49), followed by Jordan (US\$2.34), West Bank (US\$1.85) and the Gaza Strip (US\$1.8). The lowest rate observed was in Syria (US\$1.54).

In 2008, average expenditure on medical supplies per served refugee was US\$6.4, Agency-wide (see Figure 12). The highest rate was recorded in Lebanon (US\$10.72), followed by the Gaza Strip (US\$7.98), West Bank (US\$6.16) and Jordan (US\$4.88). The lowest rate was observed in Syria at US\$4.65.

Expenditure on services

Figure 13 shows that 32% (US\$6.81 million) of the total expenditure for medical supplies (US\$21.23 million) was for medical equipment and related supplies. The expenditure on medical equipment from all funds was



US\$1.59 million. As shown in Table 13, the highest expenditure in 2008 was for laboratory equipment 40%, followed by dental equipment 33% and general & outpatient equipment 26%. The lowest expenditure was recorded for physiotherapy and radiology equipment (1% each).

The total expenditure on drugs in 2008 was US\$14,41 million, out of which 26% was spent on drugs for the treatment of diabetes and cardiovascular diseases.

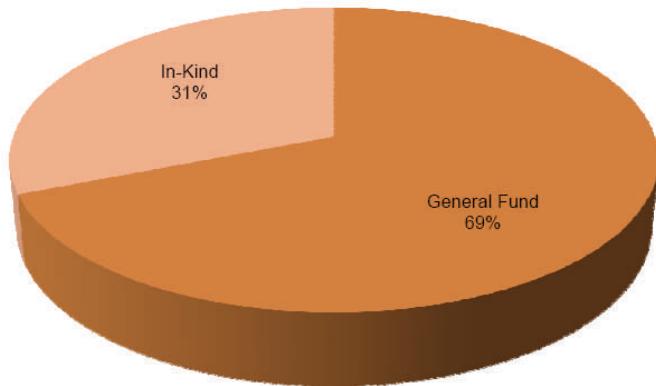


Figure 9 - Proportional expenditure on medical supplies, in-kind contributions and General Fund expenditure

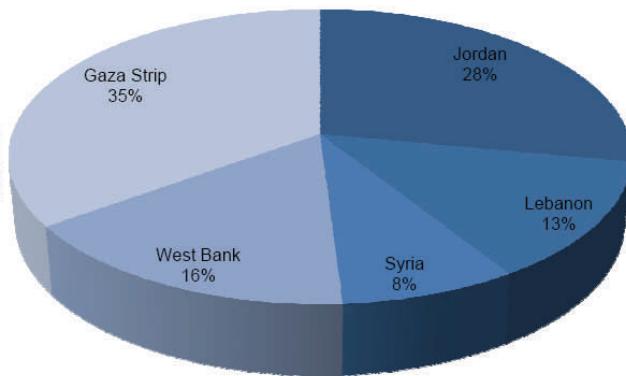


Figure 10 - Proportional expenditure by Field in 2008

** Expenditure on medical equipments was excluded from all figures in this section. This is because it is a non-regular expenditure and depends mainly on funds secured through projects.

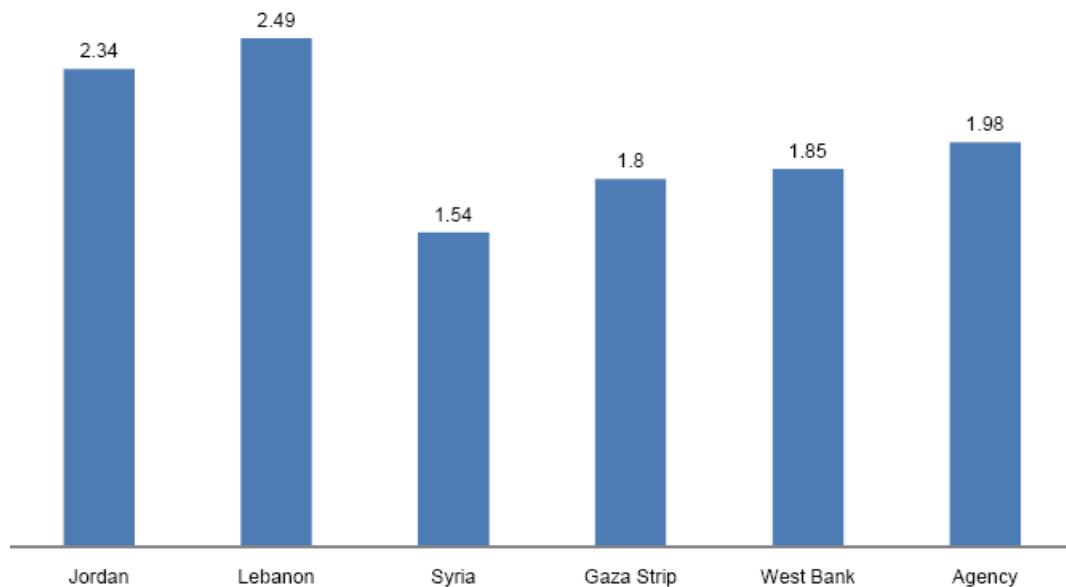


Figure 11 - Average expenditure on medical supplies per outpatient medical consultation in 2008 (US\$)

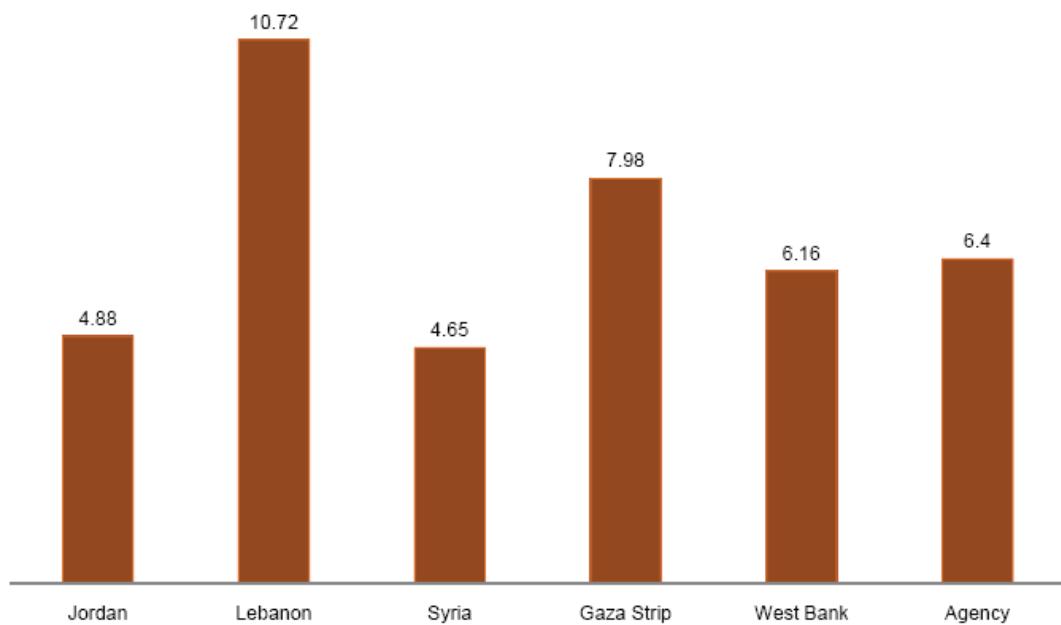


Figure 12 - Average expenditure on medical supplies per served refugee in 2008 (US\$)

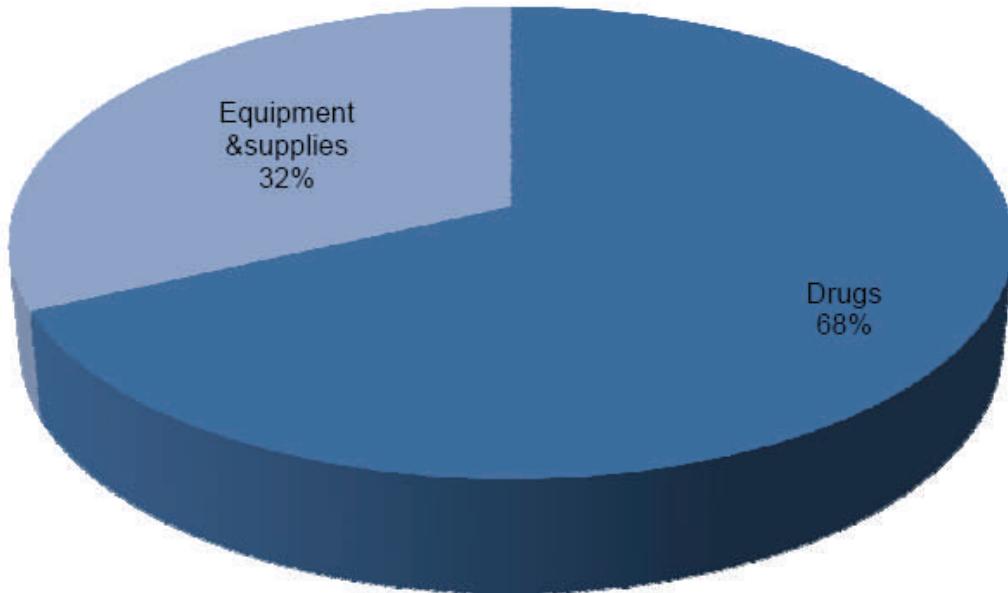


Figure 13 - Proportional expenditure on Drugs and Equipment

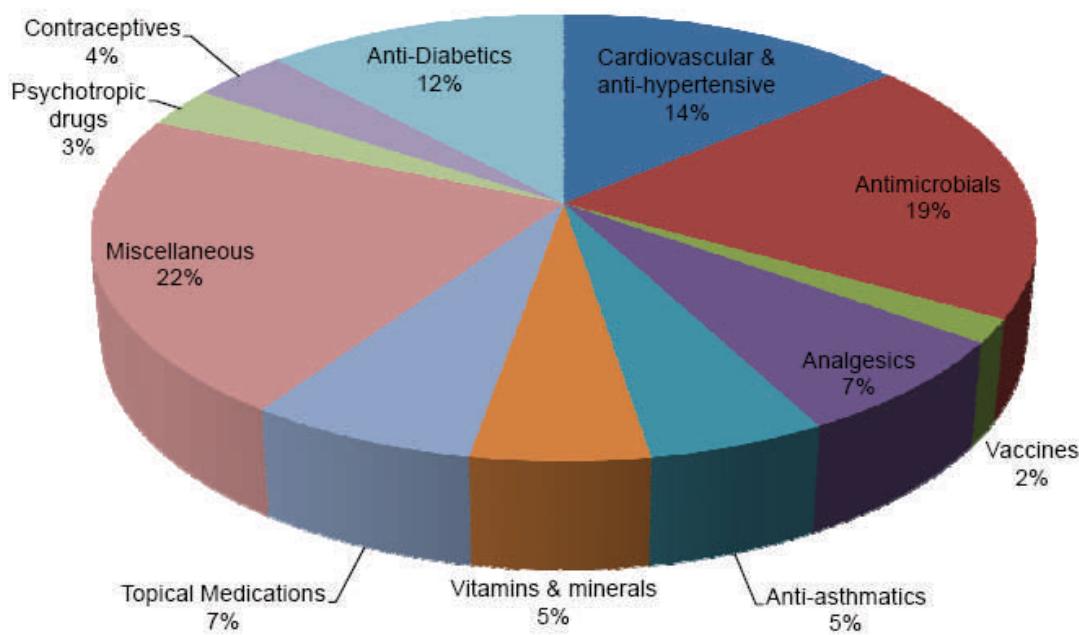


Figure 14 - Proportional expenditure on Drugs by group

Table 13 - Expenditure on Medical Equipment 2008 (GF: General Fund, P: Project fund) in US\$

	Laboratory		Dental		General		Physiotherapy		Radiology		All equipment	
	GF	P	GF	P	GF	P	GF	P	GF	P	GF	P
Jordan	172 612	81 655	44 723	77 699	42 696	66 022	0	169	0	0	260 031	225 545
	254 267		122 422		108 718		169		0		485 576	
Lebanon	0	52 169	0	0	0	15 053	0	0	0	11 873	0	79 095
	52 169		0		15 053		0		11 873		79 095	
Syria	5 939	42 778	9 709	0	0	23 250	0	0	0	0	15 648	66 028
	48 717		9 709		23 250		0		0		81 676	
Gaza Strip	16 030	143 250	161 389	221 106	108 004	87 577	0	0	0	0	285 423	451 933
	159 280		382 495		195 581		0		0		737 356	
West Bank	0	120 196	0	16 000	0	69 145	0	9 997	0	0	0	215 338
	120 196		16 000		69 145		9 997		0		215 338	
Agency	194 581	440 048	215 821	314 805	150 700	261 047	0	10 166	0	11 873	561 102	1 037 939
Grand total	634 629		530 626		411 747		10 166		11 873		1 599 041	

19% was spent on antibiotics, the single drug class accounting for the highest proportion of the total drug expenditure. (Figure 14). Analysis of data received from all Fields revealed a decrease in the rates of antibiotic prescription Agency Wide from 34% to 29% in 2008. As noted from figure 15 the drop in overall rate of antibiotic prescription is mainly due to the fact that Gaza successfully decreased the rate by almost 50% through intensive follow up and supervision at Health Centre level. It should be mentioned that the rate of antibiotic prescription shown for Syria was calculated in only five Health Centres, where the percentage was higher than the acceptable rate***. Other centres in Syria discontinued the data collection after a rapid assessment conducted at the beginning of 2008 placed their antibiotic prescription rates below 25%. In 2008 the definition of antibiotic prescription rate was revised so as to only outpatients. This was an effort to increase standardization in the calculation of this indicator and increase comparability of figures among Fields. Therefore in 2009 a the UNRWA Health Programme will present the new baseline against which all future years will be compared.

It is highly recommended that continuous training for all physicians on rational utilization of antibiotics is introduced with more focus, control and follow up on prescribing habits. Simultaneously the Health Department will be working on reviewing the UNRWA list of antibiotics and development of Standard Treatment Guidelines.

A meeting on PIMS (Procurement Inventory Management System) was conducted in August 2008 between the Health Department, PIMS team members, and the Procurement and Logistic Division staff. During the meeting all constraints relevant to PIMS were discussed. An action plan was developed in order to follow the PIMS implementation and the needed corrective measures at Field level. In June 2008, a WHO team assessed the UNRWA pharmaceutical sub-programme for the first time. The mission lasted one week, during which HQ and Jordan Field were assessed by the team.

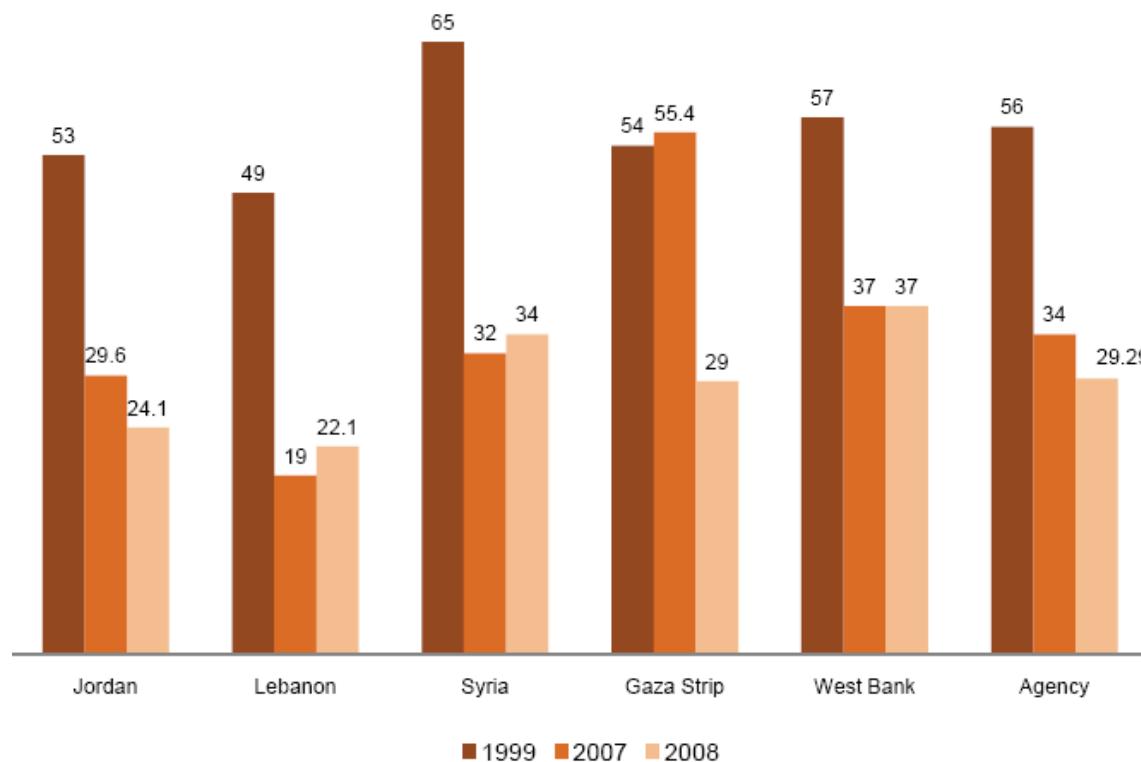


Figure 15 - Antibiotic prescription rate by Field

*** 25% is the antibiotic prescription rate target identified by UNRWA

The main recommendations for the WHO-mission are as follows:

- A drug and therapeutic committee must be established, one at Headquarters and one at Field level in order to guide the health services in all pharmaceutical issues, particularly with regard to drug selection, standard treatment guidelines and activities to promote rational use of medicines;
- Annual requirements of medicines should be based on morbidity rather than just on the previous years consumption;
- An effort should be made to procure generic medicines as apposed to branded generics; and
- Regular training should be undertaken by assistant pharmacists.

Donations

Analysis of donations (In-kind and cash) revealed that US\$2.89 million (44%) were donated to the Gaza Strip, making this the Field with the highest contribution in 2008. The lowest contribution was recorded in Syria. The distribution of donations among the Fields is shown in Figure 16.

Donations of medicines

Table 14 shows the donations in cash received during 2008, which were used for procurement of miscellaneous medicines.

The following in-kind contributions were donated during 2008:

- The Ministry of Health of the Palestinian Authority and UNFPA provided the West Bank & Gaza Fields with vaccines, iron drops and tablets as well as disposable syringes and needles;
- The Ministry of Health in Jordan provided UNRWA with vaccines and contraceptives;
- UNICEF and Health Care Society, an NGO, provided Lebanon Field with vaccines, medications disposable syringes and needles; and
- Syria's Ministry of Health and UNICEF provided Syria Field with vaccines and tuberculosis medications as well as other miscellaneous drugs.



Physiotherapy services

There is an increasing need of physical rehabilitation in the oPt. This is a combined effect of the consequences of the first and second Intifadas, and of the persisting security instability in the Gaza Strip. In 2008, three additional physiotherapy units were established in the Gaza Strip. This increased the number of health facilities providing physiotherapy services to 16. These units provide a wide range of physiotherapy and rehabilitation services including: therapeutic physical exercise, manipulation, massage, occupational therapy, hydrotherapy, electrotherapy, heat therapy and postural gymnastics, also through an outreach programme. Fifty different types of specialized physiotherapy equipment are currently being used in UNRWA Units.

As shown in Table 15, a total of 11 007 patients were treated during 2008 - an increase of 31% over 2007. The services included more than 135 000 sessions and more than 10 000 home visits.

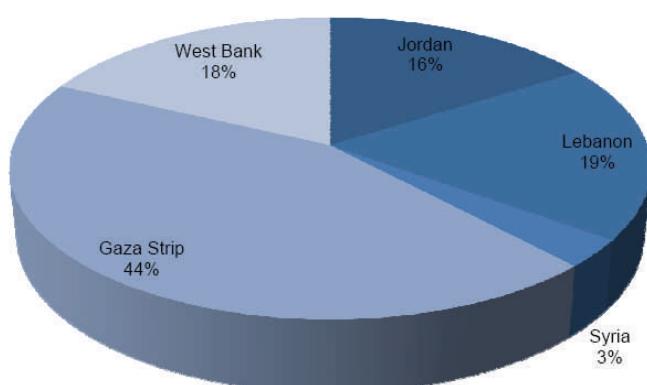


Figure 16 - Proportional distribution of Donations

Table 14 - Cash contributions donated during 2008

Donor	Field	US\$	
Japanese Government	Gaza Strip	698 946	Total contribution to UNRWA =773 308 US\$
	Lebanon	846	
	West Bank	73 516	
French Government	Gaza Strip	42 814	Total contribution to UNRWA =105 582 US\$
	West Bank	62 768	
USA Government	Gaza Strip	103 050	Total contribution to UNRWA =129 467 US\$
	West Bank	26 417	
New Zealand Government	West Bank	67 574	
German Government	Lebanon	2 453	Total contribution to UNRWA =51 276 US\$
	Syria	48 823	
Central Emergency Revolving Fund	Lebanon	76 398	
Turkish Government	Lebanon	2 013	
Canadian Government	West Bank	2 878	
Austrian Government	West Bank	183 561	

Table 15 - Distribution of patients treated at physiotherapy units in oPts in 2008

Field	Patients treated in 2007			Patients treated in 2008		
	Trauma	Non-Trauma	Total	Trauma	Non-Trauma	Total
West Bank	815	3355	4170	645	2899	3544
Gaza Strip	1950	4825	6775	1925	5538	7463
Total	2765	8180	10 945	2570	8437	11 007

Table 16 - Number of X-ray radiographs carried in and out-side UNRWA health facilities

Field	Inside UNRWA		Outside UNRWA			Grand Total
	No. of Plain X-Rays	No. of Plain X-Rays	No. of other exams	Total		
Jordan	4206	1889	23	1912	6118	
Lebanon	23 088	3683	3 141	6824	29 912	
Syria	0	1296	1849	3145	3145	
Gaza Strip	32 001	0	0	0	32 001	
West Bank	24 217	0	0	0	24 217	
Agency	83 512	6868	5013	11 881	95 393	

Table 17 - Stratification by sex and age of patients benefiting of radiology services through UNRWA

	Female	Males	0-14 years	15-44	≥ 45 years
No. of patients	44 294	40 133	24 224	37 278	22 915

Physiotherapy services are provided by 32 staff members (17 regular employees and 15 recruited under the emergency programme) in the Gaza Strip and 20 staff members (11 regular employees and 9 recruited under the emergency programme) in the West Bank.

The expenditure on physiotherapy equipment during 2008 amounted to US\$ 10 166, all of which were secured by the West Bank Field through emergency funds, project funds and/or donations.

Radiology services

UNRWA operates 19 radiology units (nine units in the West Bank, five in Gaza, three in Lebanon and two in Jordan). These units provide plain x-rays to patients attending the health centres. These services were also provided through outsourcing thanks to contractual agreements with hospitals and private radiology clinics. These included plain x-rays and other exams such as mammography, hysterosalpingiography, intravenous urography, and ultrasound. Table 16 shows the number of exams provided in all Fields during 2008.

Radiology services were provided to 84,417 patients distributed by sex and age shown in Table 17. The distribution of patients revealed that males and females accessed services in a similar fashion as did all age categories.



Fields. This resulted in the definition of the standard unit value for each test, for instance: five UV for Glucose test, three for Haemoglobin, seven for stool examination, etc.). The standards UV were consistent with other settings. The workload for each test is then obtained by multiplying the raw count of each test (i.e.: the actual number of tests performed for a year) by its unit value and expressed in minutes. The total number of each test type is then multiplied by its own UV to obtain the total workload attributable to the test. All workload units are finally added together to express the total workload for each laboratory. The productivity at each laboratory is expressed in the ratio of output (total workload units) to input (total available person-hours). In 2007 in Jordan, for example, a total of 4,518,454 workload units (WLUs) were used to perform 1,120,756 different tests in Jordan Field by 54 laboratory technicians during 266 working days (6.25 hours/day). Productivity/Tech./hour = $4,518,454 / 54 / (266 * 6.25) = 50.2$ WLUs/h, which is within the WHO-recommended limits (45-55 WLUs/h).

References

- 1.The workload unit method is a standardized counting method for measuring technical workload in a consistent manner. With this method, one work unit is equal to one minute of productive technical, clerical/counseling (aide) time. Each test has a unit value (UV), that is, the mean number of units involved in performing all activities (except specimen collection) required to complete that test. In 1997, UNRWA calculated the necessary time to perform each test by analysing in detail each step of it and the various persons involved. The analysis was conducted in 5 laboratories in each of UNRWA's five



Health Protection and Promotion

UNRWA's excellent Maternal and Child Health Care statistics have been a well-kept secret, never appearing in official reports such as the WHO Reproductive Health data base available on the internet. A way should be found to make these statistics available to the public.

Report of a WHO Technical assessment mission 2005

Programme Goal

To preserve the sustainable investment in women's and children's health, promote their mental and psychological wellbeing and attain further progress in the reduction of infant, child and maternal mortality through an integrated primary health care approach consistent with the Millennium Development Goals (MDGs) and the standards set out in the Convention on the Rights of the Child (CRC).

Programme profile

The Health Protection and Promotion Programme is an integral part of the Agency's primary health care activities. The programme offers:

- Comprehensive maternal health care to women of reproductive age including antenatal, intranatal, postnatal and family planning services,
- infant and child health care,
- school health services,
- nutritional surveillance,
- mental health,
- screening for breast cancer in Syria and Lebanon,
- prevention and control of hereditary anaemia and
- surveillance and management of sexually transmitted diseases (STDs).

The main features of the program:

- A strategic approach based on the integration of services and 'a life cycle approach' comprising pre-natal, natal, post-natal care, family planning services, infant and child and school health;
- Regular revision and updating of technical instructions, management guidelines and protocols;

- Decentralized management at different levels including at health centre, guided with the indicators generated from the health information system to improve monitoring and response at the service delivery level;
- Significant investment in staff development and capacity building using both formal, in-service and on-the-job training;
- Conduction of health services research in particular operational research; and
- Strong partnership and collaboration with other programs within UNRWA, public health authorities of host countries, WHO and other UN sister organizations, NGO's and refugee community.

Progress in 2008

- The 13th Field Family Health Officers' meeting was held in February 2008. The main objective of the meeting was to review the progress achieved in implementation of the 2007 plan of activities and to develop an annual plan of activities for 2008;
- New health educational materials were developed on various topics while a wide range of currently used pamphlets were updated as an integral part of the Agency's health education/health promotion activities;
- Full scale implementation of the Maternal and Child Health Hand Book in West Bank was successfully achieved in 2008 while preparations are completed to start in Gaza Field during 2009 and plans for future expansion to the other Fields are ongoing;
- Preparation are ongoing to introduce the preconception care services as an integral component of the maternal health care including development of guidelines, forms, training of staff and piloting the intervention which was conducted in the Jordan Field during 2008. Expansion to the other Fields is planned during 2009;
- Development of a New Child Health Record to capture the WHO new growth monitoring system and to expand the scope of growth monitoring to include infants and children 0-5 years age;
- In collaboration with the Education Department and with the support of the Tobacco Free Initiative in the EMRO-WHO and the CDC Atlanta USA, The Global Youth Tobacco Survey and the Global School Personnel Survey were conducted among a representative sample of UNRWA schools in the five Fields of operation;
- The family health programme review exercise was undertaken in all Health Centres for the fifth consecutive year, to follow-up on progress made towards addressing identified Health Centre-specific strengths and weaknesses. A team of supervisors together with Health Centre staff conducted the review using a problem-solving approach, and corrective measures were taken to address any areas that needed further improvement at the Health Centre or Field levels. The results of this exercise including review of the appointment system, waiting times, privacy, counselling, completeness of records, proper management of cases, risk assessment and cold chain, will be presented and discussed during the forthcoming 14th Field Family Health Officers' meeting;
- The Management Health Information System is well established in all health centres and the process of decentralization of programme management was further enhanced. Data generated from the system have been used to improve surveillance, monitoring and response at the service delivery level. Health centres staff can utilize the available computers to enter, process and analyse data and they are well acquainted on how to use indicators obtained from the MHIS to achieve further improvement;
- A comparison of the indicators generated by the MHIS during the second quarter of 2008 with those collected during the same period in 2007 are outlined in the relevant maternal health and family planning sections of this chapter;
- The Technical Instructions on provision of maternal health care was updated and revised to address new additional interventions which will be introduced during 2009 namely preconception care, post-abortion care, screening for domestic violence in addition to emergency contraception methods;

- Reorientation of the Oral Health services towards more prevention through integration into the maternal and child health care was finalized and will be implemented during 2009; and
- Another significant achievement in 2008 was the standardized training plan covering both in-service and on-the-job training which was implemented to enhance institutional capacity building at the service delivery level.

Table 1, shows that during 2008 a total of 3 361 staff training days were conducted, compared to 2034 in 2007 for staff in various categories.

Ante-natal care

Antenatal coverage

During 2008, UNRWA primary health care facilities cared for 102 145 pregnant women which accounted for 77.6% of all expected pregnancies among the refugee population. The number of expected pregnancies is calculated by multiplying the total number of registered refugee population (as per UNRWA registration) by the crude birth rates published by the Host Authorities which are as follows: 2.9% in Jordan, 1.6% in Lebanon, 2.3% in Syria, 3.55% in Gaza and 2.56% in the West Bank. The highest coverage rates were in Gaza and Syria and the lowest in Jordan, Lebanon and the West Bank. The high rates of coverage could be largely attributed to the efforts exerted in order to improve quality and encourage early registration for pre-natal care. The low rate in the West

Table 1 - Family health training activities in 2008

Training subjects	Staff-days training by staff category			
	Medical	Nursing	Others	Total
Training on MCH handbook	228	863	88	1179
Evaluation workshop	10	9	0	19
Training on post abortion care	6	64	0	70
Training on management of growth retarded children	40	116	156	312
Training on family health program review	25	31	1	57
Training on infection control	1	29	0	30
Training on stress management	20	0	0	20
Training on psychosocial support	7	141	0	148
Training on Disability awareness	19	15	0	34
Protective environment for children	1	0	0	1
Training on STIs/STDs	43	70	0	113
Training on school health activities	35	15	88	138
Introduction and training on the Global youth Tobacco Survey	25	0	25	50
New TIs of the Supplementary feeding program	45	61	0	106
Training/orientation of newly recruited staff on family health activities	15	2	0	17
Quality assurance and customer satisfaction	513	334	0	847
Breast awareness campaign	0	0	69	69
Training on immunization	0	4	0	4
Training on preconception care	4	15	8	27
IUD insertion	25	27	0	52
Training Workshop on infant and early child mortality study	27	41	0	68
Total	1089	1837	435	3361

Bank is mainly due to the restricted access to services, imposed by frequent closures, checkpoints, curfews and the Separation Wall, while the low coverage rate of 59.7% in Jordan is mainly due to the underserved refugee communities residing outside camps.

The number of pregnant women registered for antenatal care during 2008 increased by 2.4% over the number in 2007 with an increase of 5.8% in Gaza, 4.9% in Lebanon

2.8% in Syria and 0.8% in Jordan while there was a decrease by 4.3% in the West Bank, the increase in the number of pregnant women registered in Gaza Lebanon and Syria could be attributed to increased demand for maternal services.

Risk assessment

During 2008 and according to the UNRWA risk scoring system using the rapid assessment technique, there were no significant changes in the risk status of pregnant women attending UNRWA health centres. 15% compared to 14.3 in

2007 of pregnant women were classified in the high-risk category and 23.8% compared to 24.9% were alert (at moderate risk). This meant that more than one third of pregnant women under supervision needed special care, including assistance during delivery. The rates varied from one Field to another as shown in Table 3, with the highest high-risk rate of 19.9% in Gaza Strip followed by 13.0% in Jordan and 12.1% in the West Bank. This could be largely attributed to high parity, early marriage, too early and too late pregnancies, and the high prevalence of anaemia. Whereas the lowest rates of 8% and 8.9% in Lebanon and Syria respectively where the total fertility rate has declined and the marital age has increased in the last two decades.

Tetanus Immunization

Similar to previous years, a rapid assessment was carried out to assess the level of protection of pregnant women against tetanus based on current and past immunization records. The assessment revealed that optimal immunization coverage continued to be maintained and that 99.4% of pregnant women could be considered protected according to the current criteria of immunization. No cases of tetanus neo-natorum were reported in 2008.

Table 2 - Coverage of UNRWA's antenatal care in 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Registered refugees	1 951 603	422 188	461 879	1 073 303	762 820	4 671 811
Expected No. of pregnancies	56 596	6 755	10 624	38 102	19 528	131 606
Newly registered pregnancies	33 810	5 262	10 154	39 565	13 354	102 145
Coverage rate	59.7	77.9	95.6	100	68.4	77.6

Table 3 - Proportional distribution of pregnant women according to risk status through rapid assessment in 2008

Field	Risk Status		
	High	Alert	Low
Jordan	13.0	25.1	61.8
Lebanon	8.0	25.4	66.7
Syria	8.9	27.1	64.0
Gaza Strip	19.9	21.6	58.5
West Bank	12.1	24.3	63.6
Agency	15.0	23.8	61.2

As a result of the optimal immunization coverage maintained during the last decade, no cases of tetanus were reported among mothers or newborns.

Data from the Maternal and Child Health/Family Planning module of the MIHS provided indicators for quality of antenatal care. These indicators are as follows:

Number of antenatal visits

A key objective of the maternal health care programme is to ensure that women register for antenatal care as early as possible in pregnancy to allow ample time for risk identification and management, and to meet the WHO recommended standard of at least four antenatal visits or more during pregnancy.

Analysis of the 2008 data reveals that the percentage of pregnant women who paid four antenatal visits or more to UNRWA maternal health services was similar to the reported during 2007 at 90.3%. The proportion was highest in Gaza (96.0%), followed by Lebanon (95.9%), Jordan (87.9%), and Syria (87.6%), and lowest in the West Bank (83.6%) as shown in Table 4. However, the

average number of antenatal visits showed an increase in all Fields ranging from 6.1 visits in Syria the lowest to 8.4 visits in Gaza the highest, giving an Agency-wide average of 7.4 antenatal visits per pregnancy compared to 7.2 visits during 2007.

Early registration for ante-natal care

Early registration for ante-natal care is measured by the Proportion of pregnant women who registered during the first trimester. As can be seen from Table 5, the trend for early registration continued during 2008 with 74.9% of pregnant women Agency-wide registered during first trimester compared to 72.1% during 2007, while 22.4% registered during the second trimester and only 2.7% registered during the third trimester.

Figure 2 shows that the trend in proportion of women who registered during the first trimester increased substantially during the period 2003 to 2008. This increase was consistent in all Fields.

Table 4 - Proportion of pregnant women by No. of antenatal visits in 2008

No. of antenatal visits	Jordan %	Lebanon %	Syria %	Gaza %	West Bank %	Agency
1	3.1	0.6	2.0	0.1	2.4	1.7
2 – 3	9.1	3.5	10.4	3.9	14.0	8.0
4 – 6	35.2	23.3	45.7	22.8	43.5	32.8
7 – 9	43.7	51.8	40.5	55.9	36.6	46.8
10+	9.0	20.8	1.4	17.2	3.6	10.7
Total	100	100	100	100	100	100

Figure 1 - Pregnant women protected against tetanus 1995-2008 (%)

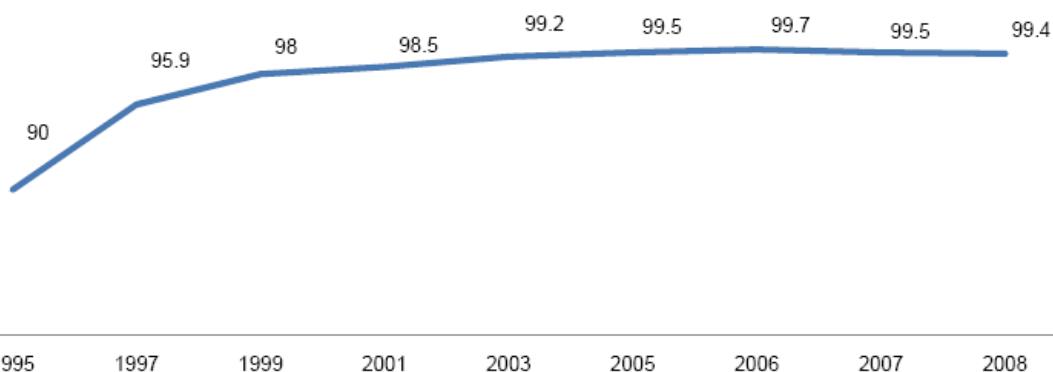
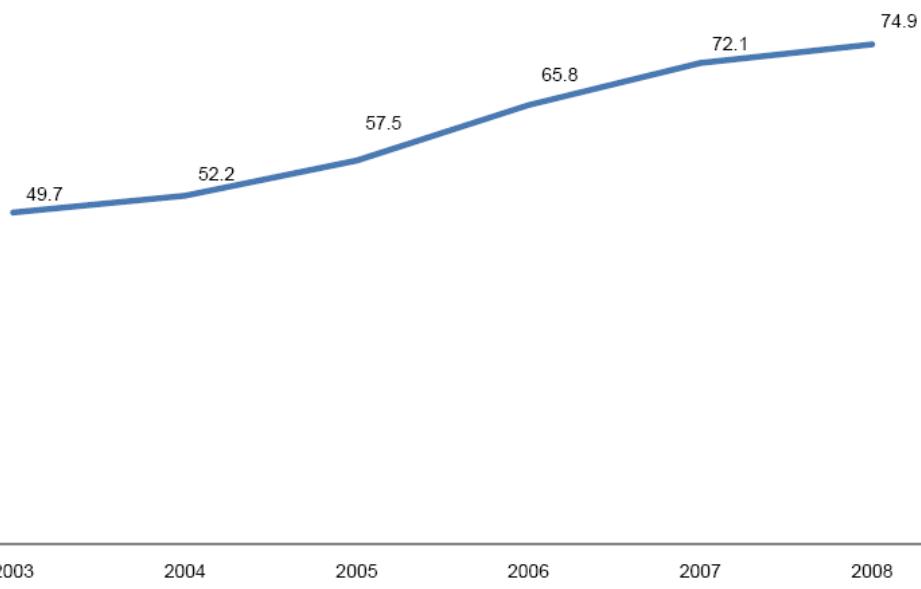


Table 5 - Maternal health indicators in 2008

Indicator	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Distribution of pregnant women according to time of registration						
During 1 st trimester	70.8	88.4	71.7	79.4	72.9	74.9
During 2 nd trimester	24.3	9.8	24.6	20.0	24.8	22.4
During 3 rd trimester	4.9	1.8	3.6	0.6	2.4	2.7
Percentage of pregnant women who paid 4 visits or more	87.9	95.9	87.6	96.0	83.6	90.3
Average No. of antenatal visits	6.5	7.4	6.1	8.4	7.4	7.4
Percentage of pregnant women delivered by trained personnel	99.9	99.6	99.6	100	99.6	99.9
Percentage of deliveries in health institutions	99.7	98.0	95.3	99.8	98.9	99.1
Overall discontinuation rate among family planning users (%)	8.9	5.6	4.5	5.9	5.8	6.5

Figure 2 - Trend of the proportion of pregnant women who registered during the 1st trimester

Intra-partum care

UNRWA subsidises the hospital delivery of pregnant women classified as high-risk either by referral to contracted hospitals or through reimbursement of costs. As shown in Table 6 and Figure 3, hospital delivery was the main choice of delivery during 2008, 95.7% of the reported deliveries Agency-wide took place in hospitals compared to 85.4% in 2002, 90.6% in 2005 and 95.2% in 2007. This increase in the proportion of hospital deliveries was mainly due to the shift from private clinics and home delivery to hospitals. As can be seen from Table 6, similar to previous years, home deliveries and delivery in maternity units continued to decrease. During 2008 only 0.8% of deliveries were carried out at home compared to 1.3% in 2007 and only 18 deliveries in maternity units were reported from Gaza field. The highest rate of home deliveries was in Syria; however, the percentage of home deliveries in that Field followed the same trend of decrease in all the Fields, that dropped from 15.4% in 2000 to 7.9% in 2005 to 5.5% in 2007 and to 4.5% in 2008. It is worth mentioning that the vast majority of these home deliveries were attended by either qualified midwives or physicians. Data collected through the MHIS indicates that the percentage of women who delivered with assistance from trained personnel Agency-wide was 99.9% with slight variations between Fields. This rate was 100% in Gaza, 99.9% in Jordan and 99.6 in Lebanon, West Bank and Syria.

Outcome of pregnancy

The total number of pregnant women who were expected to deliver during 2008 Agency-wide was 101 834. Active surveillance of the outcome of pregnancy for those women indicated that 94 403 delivered (92.7%) and 7 234 aborted (7.1%). The outcome of only 197 pregnant women (0.2%) compared to 223 in 2007 who received antenatal care at UNRWA health care facilities remained unreported or unknown as shown in Table 7. The percentage of unknown outcomes dropped from 2.8% in 2002 to 0.2% in 2008. The highest percentage of unknown outcomes was in the West Bank at 0.9% compared to 1.4% in 2007 and 9% in 2002. Although there was a reduction in the West Bank percentage, it is still considered high. This high percentage of unknown outcomes in the West Bank could be attributed to inadequate feedback and follow up of defaulters due to curfews and restrictions imposed on the movement of clients and staff.

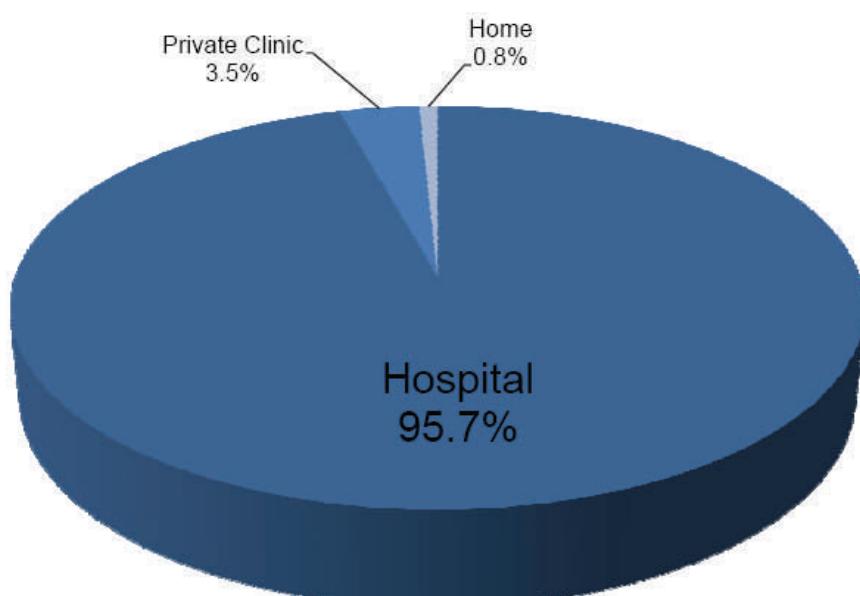


Figure 3 - Proportional distribution of deliveries according to place in 2008

Table 6 - Proportional distribution of deliveries according to place in 2008

Deliveries/Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Total No. of reported deliveries	31 364	4 440	9 397	35 548	12 487	93 236
Distribution of deliveries according to place (%)						
At home	0.4	0.3	4.5	0.2	1.0	0.8
In hospitals	99.6	98.9	93.3	91.3	98.8	95.7
At private clinics	0.04	0.7	2.2	8.4	0.2	3.5

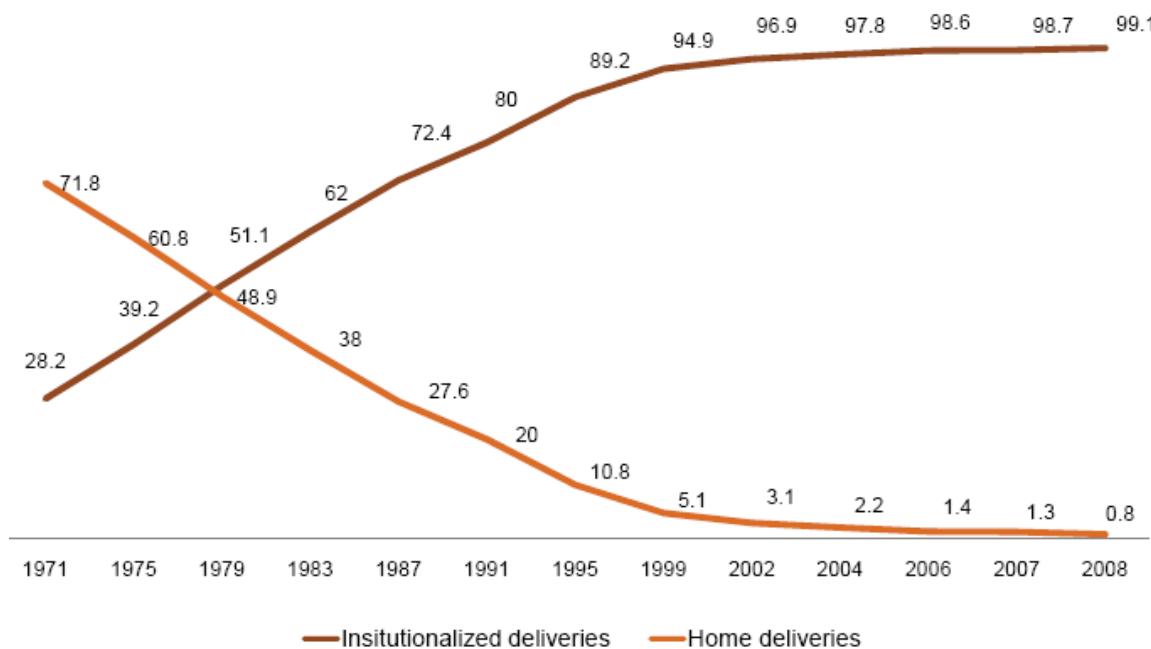


Figure 4 - Trend of the proportion of pregnant women who registered during the 1st trimester

Table 7 - Outcome of pregnancy in 2008

Field	No. of expected deliveries 2008	Known outcome				Unknown		
		Deliveries No.	Deliveries %	Abortions No.	Abortions %	Total No.	Total %	No.
Jordan	34 176	31 845	93.2	2312	6.8	34 157	99.9	19
Lebanon	5027	4458	88.7	569	11.3	5027	100	0
Syria	10 083	9411	93.3	622	6.2	10 033	99.5	50
Gaza Strip	38 896	35 921	92.4	2969	7.6	38 890	99.9	6
West Bank	13 652	12 768	93.5	762	5.6	13 530	99.1	122
Agency	101 834	94 403	92.7	7234	7.1	101 637	99.8	197

Caesarean Section

Analysis of the data obtained through the hospital management information system indicated that the caesarean section rate among women assisted through the UNRWA hospitalization schemes varied widely from one Field to another. These rates however, relate to women in the high-risk category and not to all reported deliveries. Table 8 shows that the caesarean section rate all reported deliveries was highest in Syria at 28%, although this is a reduction compared to previous years. This reduction could be attributed to the contracts concluded with University Hospitals, which have a reputation of a more rational caesarean section rate. Although there was a reduction in the caesarean section rate in Syria, it is still considered high even among high-risk pregnant women. This may reflect client preference and the medical practice in some contracted hospitals. The lowest rate was reported from Gaza with 12.0%.

Gestational Diabetes Mellitus and Hypertension

Agency-wide the prevalence of diabetes mellitus during pregnancy in 2008 was 3.2% compared to 2.4% in 2007 and to 1.9% in 2006. This increase in the prevalence of diabetes during pregnancy could be attributed to better

surveillance and improved screening activities after the changes introduced following the 12th Field Family Health Officers meeting in 2007 (which involves the establishment of new cut off point to perform the Oral Glucose Tolerance Test (OGTT) for pregnant woman from 110mg/dl to 85mg/dl). As shown in Table 9, the prevalence of diabetes varied from 5.2% in Lebanon, to 4.0% in Jordan, to 3.2% in West Bank, to 2.7 in Syria and to 2.4% in Gaza, which indicates that some Fields achieved the expected rate of DM while others are still below the universally expected rate of 3-5%. This suggests further efforts need to be exerted to improve the detection rate. Further analysis of the data revealed that 19.2% of women with diabetes during pregnancy had pre-existing diabetes, 43.0% had gestational diabetes and recovered after delivery and 9.6% were diagnosed during pregnancy and did not recover after delivery while 28.0% were still pregnant at the end of 2008. The prevalence of hypertension during pregnancy including pre-existing and pregnancy-induced hypertension was 9.2% while it was 8.3% in 2007 and 7.2% in 2006 with wide variations between Fields as shown in Table 9. 45.7% of hypertension cases were pregnancy-induced and recovered after delivery, 25.7% of women had pre-existing hypertension, 14.8% were identified during pregnancy and the condition persisted after delivery, while 9.7% were still pregnant at the end of the year.

Table 8 - Caesarean section rate among UNRWA-assisted deliveries and all reported deliveries through Management Health Information System (MHIS) in 2008

Field	Total deliveries	Assisted deliveries (high risk) (In-patients Reports)				All reported deliveries (MHIS)	
		Vaginal deliveries		Caesarean section rate			
		No.	%	No.	%		
Jordan	14 884	11 634	78.2	3 250	21.8	16.1	
Lebanon	2 497	1 753	70.2	744	29.8	23.7	
Syria	2 075	1 086	52.3	989	47.7	28.0	
Gaza Strip	17	16	94.1	1	5.9	12.0	
West Bank	8 048	6 300	78.3	1 748	21.7	16.8	
Total	27 521	20 789	75.5	6732	24.5	16.3	

Table 9 - Prevalence of diabetes and hypertension during pregnancy in 2008

Prevalence rate (%)	Jordan	Lebanon	Syria	Gaza Strip	West Bank	All
Diabetes during pregnancy	4.0	5.2	2.7	2.4	3.2	3.2
Hypertension during pregnancy	7.5	8.0	5.2	13.7	3.7	9.2

Post-natal care

UNRWA's post-natal care services carry out a thorough medical examination of the mother and the newborn infant at UNRWA health care facilities or at home, whichever is more accessible and convenient to the families.

Table 10 indicates that during 2008 a total of 89 418 women received post-natal care compared to 86 238 in 2007 and 76 813 during 2006, representing a coverage rate of 94.4% of the expected deliveries, with the highest rates of 99.3% in Gaza and 97.5% in Lebanon, and the lowest rate of 88.8% in West bank and 91.0% in Jordan. This low coverage in the West Bank could be attributed to the continued restriction on movement due to the emergency situation in the oPts, while in Jordan it could be explained by the late attendance of clients after the postnatal period.

Family planning services

A total of 23 692 new family planning acceptors were enrolled in the family planning programme during 2008. The total number of continuing users of modern contraceptive methods Agency-wide increased by 7.1% from 123 899 in 2007 to 132 732 in 2008.

It is worth noting that the number of new family planning acceptors in Gaza increased markedly during the last three years, from 1 365 in 2005 to 7 551 in 2008. This could be attributed to the efforts exerted by health staff at service delivery level and improved counselling. The number of continuing users in Gaza dropped from 30 466 in 2001 to 29,540 in 2003 then increased to 30 765 in 2004, which is the pre-Intifada level, to 41 874 in 2007 and to 45 232 in 2008. There was an increase in the number of continuing users by 14% in the West Bank, 8% in Gaza, 7.4% in Jordan, 2% in Lebanon, and 0.5% in Syria.

Table 10- Post-natal care coverage in 2008

Field	No. of deliveries	No. women who received care 2008	Coverage of Post-natal care (%)
Jordan	31 883	29 015	91.0
Lebanon	4 458	4 345	97.5
Syria	9 469	8 818	93.1
Gaza Strip	35927	35 692	99.3
West Bank	13 010	11 548	88.8
Agency	94 747	89 418	94.4

Table 11- Family planning services in 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
No. of new Family Planning acceptors during the year	8 593	1 759	2 787	7 551	3 002	23 692
Total No. of continuing users at end year	35 246	12 598	18 267	45 232	21 389	132 732
Distribution of FP users according to method:						
IUD	40.2%	41.4%	41.8%	50.7%	55.0%	46.5%
Pills	30.7%	27.8%	27.6%	24.8%	25.4%	27.1%
Condoms	24.2%	29.5%	26.3%	19.9%	16.3%	22.3%
Spermicides	2.0%	0.5%	1.2%	0.8%	1.1%	1.2%
Injectables	2.9%	0.8%	3.1%	3.8%	2.2%	2.9%

The distribution of family planning acceptors according to the contraceptive method used is shown in Table 11. The same pattern of contraceptive method mix was maintained during 2008 and IUDs continued to be the most popular method of contraception followed by contraceptive pills and condoms.

Couple-Years of Protection (CYP) is an output indicator used by UNRWA to estimate the number of clients (or couples) that were protected from pregnancy in a year by an UNRWA dispensed contraceptives. The contraceptives dispensed during 2008 through the Agency's family planning services provided 118 840 CYP with variations between the Fields as shown in

Table 12. The Table also shows that the CYP provided during 2008 increased in all Fields except in West bank and Lebanon where there was a mild decrease in spite of an increase in users.

Data from the Maternal and Child Health/Family Planning module of the MHIS revealed that the discontinuation rate of modern contraceptives ranged from 4.5% in Syria and 5.6% in Lebanon to 8.9% in Jordan. In 1996, a study was conducted to assess contraceptive practices and the discontinuation rate of modern contraceptives shortly after the introduction of family planning services into the Agency's maternal health programme in 1994. The progress attained thus far is shown in Figure 5.

Table 12- Years protection provided through the Agency's family planning programme, 2000-2008

Couple Years of protection (CYP)	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
During 2000	12 261	7 865	18 895	33 685	11 179	83 885
During 2002	20 801	11 442	16 236	30 043	11 450	89 972
During 2004	26 241	11 065	18 762	31 753	13 784	101 605
During 2006	28 921	9 790	15 992	38 941	19 934	113 578
During 2007	29 911	10 164	18 220	37 789	20 083	115 641
During 2008	31 258	9 716	18 404	41 049	18 412	118 840

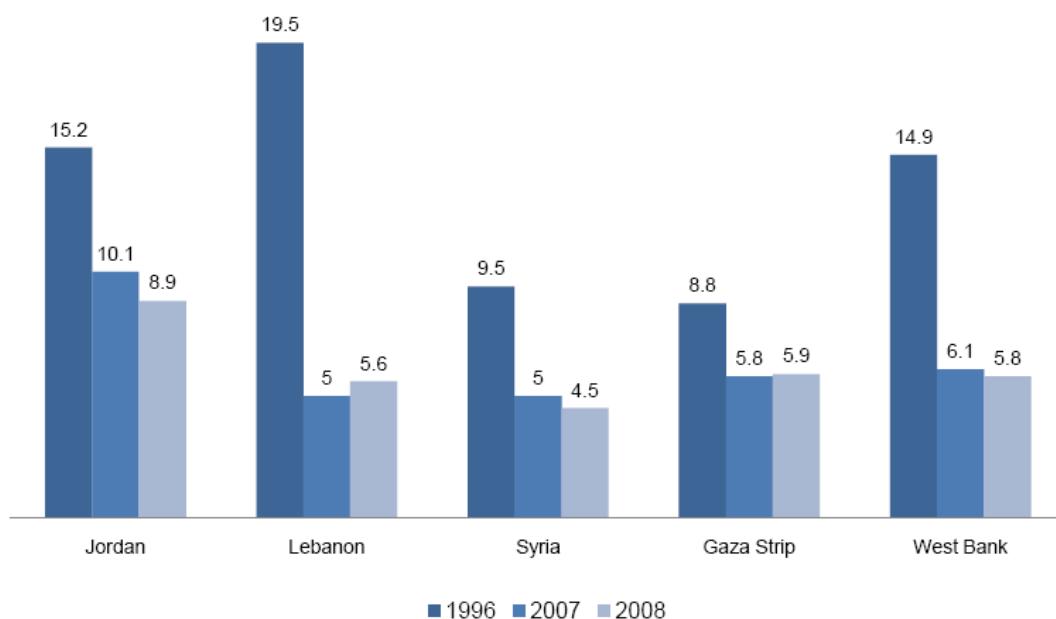


Figure 5 - Discontinuation rates of modern contraceptives (1996, 2007, 2008)

The success of the family planning programme is evident from Figure 6, which shows a steady increase in the number of family planning acceptors over the number of pregnant women cared for, since the introduction of the family planning programme. During the last 10 years, there has been a three-fold increase in the number of women enrolled in the programme. The total number of family planning acceptors as an output indicator, reflects

the change in the reproductive health practices of the refugee population. The last UNRWA study on current contraceptive practices conducted in 2005 revealed that there was a notable drop in the total fertility rate among mothers of children 0 to 3 years of age who attended the Maternal and Child Health clinics since the introduction of the family planning programme as shown in Figure 7. It can be also noted that the highest fertility rates in 2005 were in the Gaza Strip and Jordan.

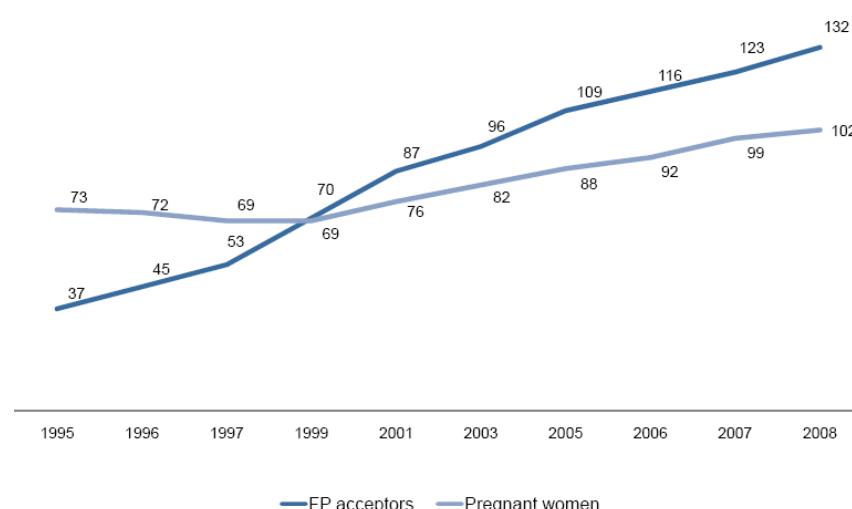


Figure 6 - Total number of pregnant women and FP acceptors in thousand (1995- 2008)

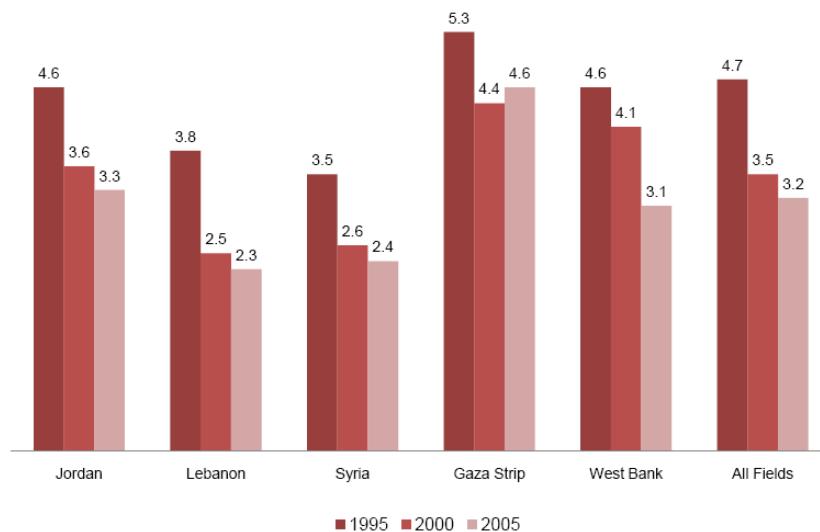


Figure 7 - Change in total fertility rates between 1995, 2000 and 2005

Cervical and breast cancer screening

In order to provide secondary prevention aimed at early detection and management of cervical and breast cancer at an early curable stage, and to promote primary prevention activities, UNRWA implemented a screening programme for breast and cervical cancer which started in 2006. The level of implementation varied between the Fields according to the availability of funds, and whether there were technical or operational difficulties. This service was outsourced through contracts in two Fields - Syria and Lebanon – for the mammogram and cytology screening tests. While technical and budgetary limitations are preventing the implementation of the mammogram and cytology screening tests in other Fields, it is unfortunate that funds are not expected to be secured for the ongoing implementation of this programme in Syria and Lebanon in 2009, as it has been a success thus far. See below for details.

In Lebanon

- Breast cancer screening: A total of 1989 women of the target population were screened for cancer breast by Mammography and Breast Ultrasonography if indicated. 94 cases showed abnormal Mammography/Breast Ultrasonography, four (7%) of the screened. Only 19 cases proved positive for cancer breast by Breast Biopsy, which corresponds, to a detection rate of 1%; and
- Cervical cancer: A total of 1255 women were screened for cancer cervix using Pap smear. Only one case proved positive for cancer cervix (CIN I), which corresponds, to a detection rate of 0.07%.

In Syria

- Breast cancer screening: a total of 845 women were screened for mammography, and out of them 101 cases (12%) were considered suspicious. Of those 42 cases were ultimately found confirmed diagnosis of breast cancer and they were referred for surgery

and further treatment, which corresponds to a detection rate of 5% among screened women; and

- Cervical cancer: A total of 740 women underwent pap smears, and out of them 27 (3.6%) cases screened positive. Of those, ten cases were diagnosed as cancer and were referred for treatment. This corresponds to a detection rate of 1.4% among screened women.

Surveillance of maternal mortality

Pregnancy is a normal, healthy state which most women aspire to at some point in their lives. However, this process carries with it serious risks of death and disability, most of the deaths could be avoided if preventive measures were taken. For every woman who dies, many more suffer from serious conditions that can affect them for the rest of their lives. Women die because they are simply unaware of the need for care, or they are unaware of the dangerous warning signs or because services at various levels are inaccessible and/or inadequate.

During 2008, a total of 22 maternal deaths were reported from all Fields, giving a maternal mortality ratio of 21.6 compared to 27.7 per 100 000 live births in 2007. Eight deaths were reported from Jordan, seven from the Gaza Strip, three cases from each West bank and Lebanon and only one case was reported from Syria.

All cases were registered at UNRWA clinics for antenatal care, and 18 cases (81.8% compared to 74.9 for all pregnant women) were registered during the first trimester. Most maternal deaths were of multi-parity and/or pregnancy after 30 years of age. No maternal deaths were reported among women below 20 years, while seven maternal deaths were women 39 years and more. Four deaths were for women in the age category of 20-24 years, three cases were among women aged 25-29 years, while eight cases were women aged 30-38 years.

Nineteen cases were with (Gravid>3) history of three pregnancies or more. Six cases died during pregnancy, and two during labour, while 14 cases of maternal death occurred after delivery during the postnatal period. Twenty cases died in hospitals while two cases died at home (one in Gaza and one in Jordan). Of note is that five of the women who died paid less than four visits to UNRWA clinics. Eight maternal deaths (36.4%) were due to preventable causes including five cases of toxæmia/hypertension and three cases of haemorrhage. Similar to previous years Pulmonary embolism was the main reported cause of maternal death in eight cases (36.4%), and two cases (9%) died due to septic shock. One case died from each liver failure, septic shock, and aspiration pneumonia finally the cause of death in one case was not ascertained and was reported as unknown.

Infant and child health

During 2008, a total of 274 714 infants and children below 36 months of age, compared to 261 884 in 2007, received preventive care at UNRWA primary health care facilities including a thorough medical examination, growth monitoring, immunization against vaccine-preventable diseases and identification of special needs. These activities were supported by the health education

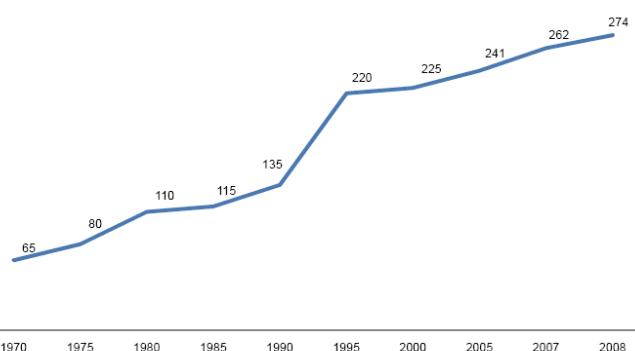


Figure 8 - Infants and children below 36 months under care (thousands)

and counselling of mothers on appropriate feeding practices and baby care. There was a 4.9% increase of infants and children attending clinics in 2008 compared to 2006. During the first year of life, mothers normally take special care in registering their newborn infants for preventive care because they are concerned about their growth and development, and are keen to provide them with the full range of primary immunizations. The attendance becomes less regular during the second and third years of life because children have received all their primary and booster immunizations and because the intervals between scheduled visits become longer due to the health condition of the child stabilizing.

Table 13 - Distribution of maternal deaths by cause of death and Field in 2008

Cause of death	Jordan	Syria	Lebanon	Gaza Strip	West Bank	Agency
Pulmonary embolism	3		1	3	1	8
Eclampsia	3		1	1		5
Hemorrhage	1	1		1		3
Septic Shock			1		1	2
Liver failure				1		1
Aspiration pneumonia					1	1
Cardiac arrest				1		1
Un-known	1	1	3	7	3	1
Total	8	1	3	7	3	22

Attendance rate during the first year of life was reported at 90% of all infants registered Agency-wide with the highest rate of 96.4% in Gaza and 94% in Lebanon. The attendance rates Agency-wide were 79% during the second year and 50% during the third year of life. Service coverage rates were estimated for the number of infants below 12 months of age that have been registered for care, to the expected number of surviving infants which is calculated by multiplying the crude birth rates published by the Host Authorities by the number of registered refugees in each country. Services coverage increased from 62.3% in 2002, to 70.6% in 2006 and to 75.2% in 2008 with the highest rates of 97.3% in Syria and 96.4% in Gaza and the lowest in Jordan (61.4%) and the West Bank (62.7%) as shown in Table 14. In Jordan, the low coverage rate compared to other Fields could be attributed to the availability of other health care providers and the limited number of UNRWA facilities with several un-served refugees' communities outside camps while in the West Bank could be attributed to obstacles or/and restricted access to health services.

During 2008, the immunization coverage was optimal for infants below 12 months of age for all EPI antigens in all Fields with 99.6%. The rates were 100% for BCG, 99.8% for each of DPT and Hib, 99.7 for OPV and Hepatitis B, 99.6% for Measles and 99.5% for the IPV. Coverage of 100% of all antigens was achieved in Gaza



and Lebanon. Likewise, the immunization coverage rate for booster doses was optimal, 99.4% for OPV, DPT and MMR. (For more details, refer to Table 1, in Chapter 4 of this report). An analysis of West Bank data by area and Health Centre revealed that the extraordinary efforts exerted by health staff and the successful collaboration with public health authorities, NGOs and community organizations, has resulted in the substantial improvement of immunization coverage in the West Bank in general, and in pockets with low coverage detected during the last few years, particularly in the Jerusalem and Hebron areas.

Table 14 - Infant and child health care in 2008

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Registered Refugees	195 1603	422 188	461 897	1 073 303	762 820	4 671 811
Estimated No. of surviving infants *	55 295	6628	10 316	37 112	19 216	128 566
Infants below 1 year registered	33927	4886	10 040	35 783	12 055	96 691
% regular attendance	83	94	86	96	91	90
Child health coverage rate	61.4	73.7	97.3	96.4	62.7	75.2
Children 1-<2 years registered	33 602	4471	9540	32 321	12 240	92 174
% regular attendance	77	91	87	72	91	79
Children 2-<3 years registered	29 443	4080	8791	32 138	11 397	85 849
% regular attendance	40	81	61	42	78	50
Total children 0-3 years registered	96 972	13 437	28 371	100 242	35 692	274 714

* No. of surviving infants = Population X crude birth rate X (1-IMR)

Infants and children with growth retardation

Efforts continued in 2008 to strengthen UNRWA's nutritional surveillance with special emphasis on management of infants and children suffering from growth retardation. Special emphasis in this respect was placed on promoting breast-feeding and counselling mothers on infant and child nutrition including the appropriate use of complementary feeding and micronutrient supplements. The 2008 data indicated that the identification of children with growth retardation improved in all Fields. The overall incidence rate increased from 3.3% in 2007 to 4.1% in 2008. The detection rate of growth retardation in some Fields was very close to the expected; while in other Fields identification of cases and underreporting was still an issue of concern especially in the West Bank. In the Gaza Strip, in light of the generalized socio-economic hardship, not only the prevalence rate was the highest, but the recovery rate was also low. The highest prevalence rates were reported from Gaza and Jordan, and the recovery rate was highest in Lebanon and West Bank (Table 15). As the data is disaggregated by sex, an assessment of disparity due to sex can be made, however it was noted that, similarly to previous years, there was no disparity due to sex.

Surveillance of infant and child mortality

Infant mortality

Analysis of data collected through routine reporting revealed that the pattern of infant mortality has remained largely unchanged over the past few years.

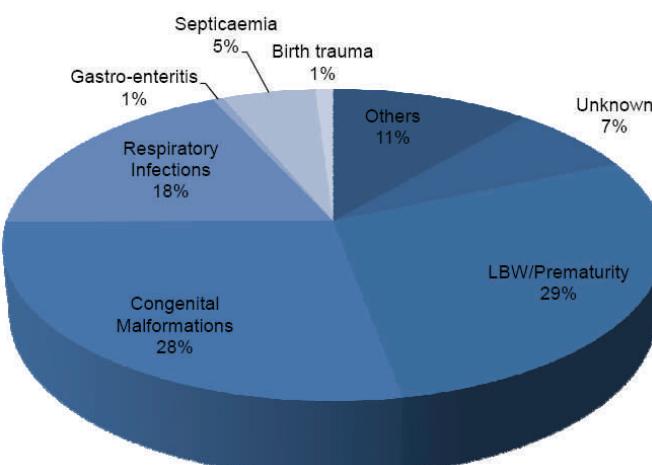


Figure 9 - Leading causes of infant mortality in 2008

The leading causes of reported infant mortality in 2008 as shown in Figure 9 were low birth weight and prematurity (28.6%), congenital malformations (27.8%) and acute respiratory infections (18.2%). The cause of death in 11.3% of reported cases could not be ascertained. Further analysis of the data showed that 39.6% died during the early neonatal period (less than one week of age), 20.2% during the late neonatal period (8-28 days) and 40.2% between 29 days and one year of age.

Deaths due to low birth weight/prematurity and congenital malformations were more likely to occur during the neonatal period (0-28 days), while deaths due to respiratory infections were equally distributed between the neonatal and post-neonatal periods. Consistent with the universally accepted pattern, infant mortality was higher among males than females, at 55.9% and 44.1% respectively.

Table 15 - Growth failure/retardation among children under three in 2008

Field	Incidence	Prevalence	Point prevalence at year end	Recovery rate (%)
Jordan	4.5	7.5	3.1	46.5
Lebanon	3.6	5.8	2.2	57.3
Syria	3.0	6.0	3.3	36
Gaza Strip	5.0	7.8	5.3	23.9
West Bank	1.5	2.7	1.2	49.4
Agency	4.1	6.8	3.6	36.5

Over the last four decades the causes of infant death have changed substantially. In 1969 for example, the two main causes of infant death were gastroenteritis and respiratory infections contributing to 36.0% and 31.4% of infant deaths respectively, while in 2008, the two main causes of deaths were prematurity/low birth weight and congenital malformation. This change in the pattern of causes could be attributed to the high vaccination coverage, better health care, improved environmental sanitation and increased health awareness among families in general and mothers in particular.

Child mortality

As noted in Figure 11, there is no major change in the pattern of child mortality during 2008, with congenital malformations ranking first among the leading causes of child mortality at 27.7% followed by respiratory infections at 14%, accidents at 13% and heart diseases which accounted for 6.1%. A reduction in the proportion of the “others” category was reported (from 36.9% in 2007 to 27.7%). This may be due to better reporting and verification of the causes of death.

Among children two to three years of age, 66.9% of deaths occurred during the second year of life, while 33.1% occurred during the third year. It is worth noting

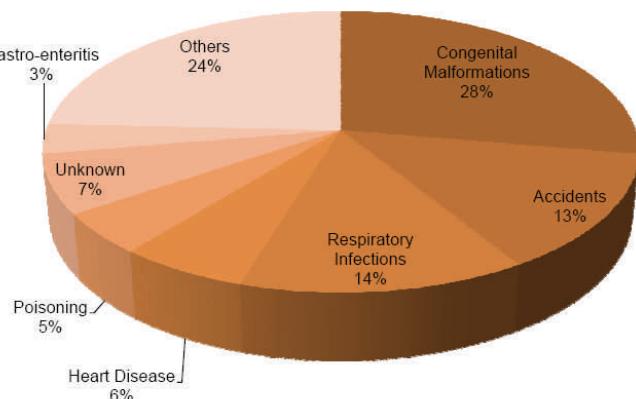


Figure 11 - Leading causes of child mortality in 2008

that (22.9 %) of the reported child deaths during 2008 were due to accidents and poisoning. Also respiratory infections are other causes of death that are preventable if immediate medical treatment is sought.

In terms of distribution of deaths by sex, child mortality was higher among females than males at 52% and 48% respectively, however there is no direct correlation between the sex of the child and the cause of death. 27% of children who died during 2008 were not hospitalised, this could be explained by the increased difficulties facing refugees to access hospital services due to limited funds allocated to subsidize hospitalization.

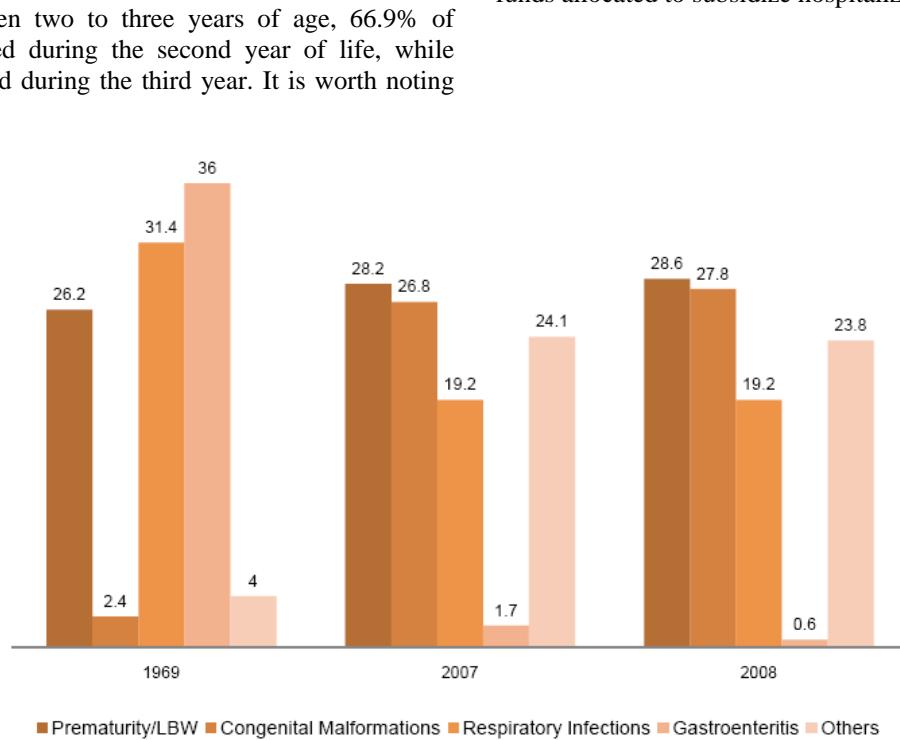


Figure 10 - Main causes of infant mortality 1969, 2007 and 2008

One of the main objectives of the Health Protection and Promotion Programme is to reduce infant and early child morbidity and mortality, and during the last five decades there has been a considerable reduction in infant and child mortality among Palestine refugees. This reduction has largely been made possible through the implementation by UNRWA of several cost effective services to prevent morbidity and reduce mortality. These services include immunization, growth monitoring, promotion of breast feeding, management of diarrhoeal diseases, family planning programmes, management of acute infections including respiratory infections, screening and management of nutritional deficiencies, environmental sanitation in camps and health education campaigns. The high infant mortality rate (160 deaths per 1000 live birth) reported in early 1950s declined to 22 per 1000 live births in 2003. Figure 12 illustrates the decline in the rate of infant mortality, which has taken place over the last five decades in the Gaza Strip.

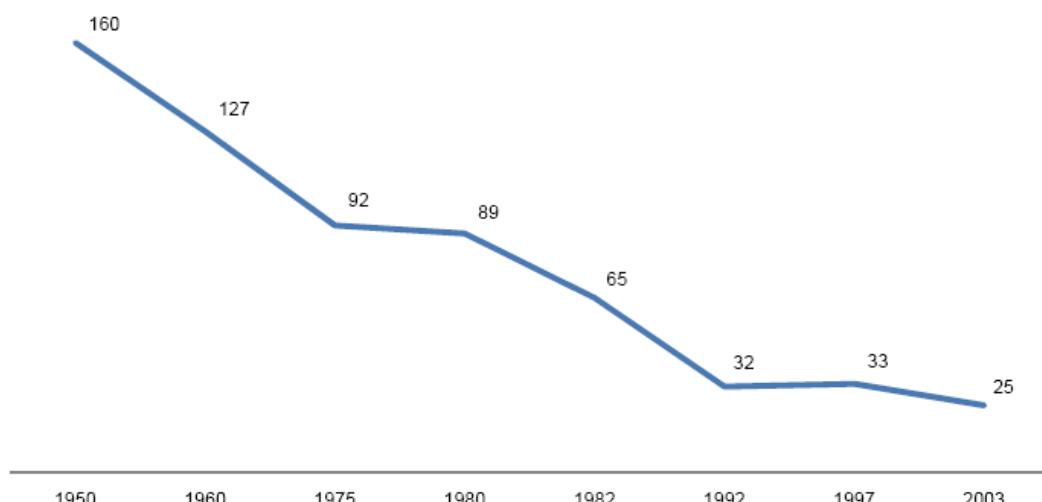


Figure 12 - Infant Mortality Rate in the Gaza Field



School health

During the school year 2007-2008, a total of 481 672 pupils were enrolled in UNRWA schools, of whom 241 183 girls and 240 489 boys, distributed between elementary grades (311 477), preparatory grades (165 669) and secondary grades (4428) only in Lebanon.

Collaboration with Education Department was further enhanced through regular and ad-hoc meetings of school health committees at various levels during which all components of the school health programme, areas for cooperation, ways and means to overcome difficulties encountered in the fields were discussed, training of Health Tutors on first phase screening and life support skills and provision of vision charts to schools.

New entrants medical examination

During the school year 2007/2008, a total of 50 033 new entrants were registered in UNRWA schools of whom

25 017 girls and 25 016 boys, they received thorough medical examination, immunization, and follow-up. The main morbidity conditions detected among new entrants were oral health problems mainly dental caries in 43.1%, gingivitis 5.4%, and 96 students with fluorosis reported from Gaza, vision defects in 3.7%, bronchial asthma in 1.9%, hernia in 1.1%, squint 0.8%, hearing impairment 0.9%, chronic otitis media in 0.8% undescended testicles 0.9%, heart disease 0.6%, thyroid enlargement in 0.5%, congenital malformations with 0.6%, haemolytic anaemia in 0.4%, arthritis in 0.4%, physical disabilities in 0.2%, epilepsy in 0.4%, type 1 DM was reported among 18 children and amputation in two children.

Health problems related to personal hygiene still prevalent among school children pediculosis was reported among 3.6% and scabies in 0.5% of new entrants.

Children with disabilities were assisted towards provision of eyeglasses, hearing aids and other prosthetic devices according to their conditions and available resources.

Screening

UNRWA screening activities in 2008 targeted pupils in the fourth and seventh grades in all Fields, and involved testing of vision, hearing and thyroid enlargement as well as checking for oral health problems. Of the 56 954 students enrolled in the seventh grade, 55 284 were screened with a coverage rate of 97.1% compared to 88.4% in 2006. The main reason for this improvement was the additional efforts exerted to improve the screening activities in the Jordan Field. The main morbidity conditions detected were vision defects in 12.0% and hearing impairment in 1.1%. Of the 53 721 students enrolled in the fourth grade, 52 907 were screened with a coverage rate of 98.5% compared to 93.3% in 2007. The main morbidity conditions detected were vision defects in 10.7% and hearing impairments in 2.0%.

Oral Health screening was also conducted for the 7th and 9th grades in all Fields and for the 4th grades in west Bank and Gaza. A total of 44 350 students were screened in the 7th grade with a coverage rate of 78%, 38 488 students in the 9th grades with coverage rate of 80% and 21 516 in 4th grade in Gaza and West Bank with coverage rate of 74%. The reason behind this low coverage rate was mainly due to the shortage of adequate mobile dental units in all Fields.

During 2008, Health Tutors also received training on first phase screening and life support skills, and vision charts were provided to all UNRWA schools.

Children with special health needs

During the school year 2007-2008 a total of 2456 school children were identified as with special health needs, they were given special health care in addition to that their school records were kept separately to facilitate follow up of cases by the school health teams. Of those 1050 were with bronchial asthma. 403 with behavioural



problems, 339 with heart diseases, 289 with epilepsy, 252 with major physical disabilities and 100 students with juvenile diabetes mellitus. On the other hand, a total of 10 014 were assisted towards the cost of eye glasses and 1005 were assisted towards the cost of hearing aids.

Immunization

During the 2007-2008 school year, school children were immunized according to the immunization schedules in each Field as follows:

New entrants received a booster dose of DT/Td immunization, and coverage Agency-wide was 99.7% compared to 98.5% in the previous scholastic year (100.0% in Lebanon, Syria, Gaza and Jordan and 99% in the West Bank). The coverage rates of OPV for new entrants were 99.8% in Gaza, 100% in Jordan and the West Bank;

- Only 11 new entrants in Jordan were vaccinated with MMR. This vaccine is given only as a *catch-up* to those students who had not been vaccinated previously; and
- Sixth grade females in Gaza and the West Bank received Rubella vaccine, and the coverage rates were 99.9% and 97% respectively.

Of note is the overall coverage rate of Td vaccination among ninth grade school children in the five Fields was 94.8%. The highest coverage rate was reported from the Gaza Strip and West Bank with 100% followed by Lebanon (97%), Syria (94%), while the lowest rate was reported from Jordan (81%) where the implementation of the school health program is compromised with the chronic shortage of staff in addition to logistics and transportation difficulties.

Health educational materials

The self-learning material booklet on “facts about tobacco”, were revised, reproduced and distributed to preparatory school children and adolescents in the vocational and teacher training centres. Approximately 75,000 copies of this booklet were distributed to the targeted students during the school year 2007-2008.

De-worming programme

In order to improve the health status of school children, UNRWA, in accordance with WHO recommendations, made arrangements for the implementation of a de-worming programme for school children enrolled in UNRWA schools in all Fields. This programme of de-worming used a single dose of an effective wide-spectrum anti-helminthic for three successive years. During the 2004-2005 school year, all Fields completed the three year campaign with a high response rate (approximately 96% of students took the tablets). Since 2006, only new entrants have received the medications

for three successive years, and during the 2007-2008 school year the de-worming programme targeted school children in first, second and third elementary classes with much success. The coverage reached in these grades was 98%. In addition to the distribution of de-worming medicine, a health awareness campaign was implemented to educate students on the importance of personal hygiene.

Vitamin A supplementation

During the 2007-2008 school year, two doses of 200,000 International Units (IU) of Vitamin A supplementation six months apart were given to school children from grade one to grade six in all UNRWA schools, and high coverage was achieved.

The Global Youth Tobacco Survey (GYTS) in UNRWA schools

Schools are an ideal setting in which to provide tobacco use prevention education. School-based tobacco prevention education programmes that focus on skills training have proven effective in reducing the onset of smoking. School-based health programmes aims to enable and encourage children and adolescents who have not experimented with tobacco to continue to abstain from any use. For young persons who have experimented with tobacco use, or who are regular tobacco users, school tobacco prevention education programmes may enable them to immediately stop all use.

School surveys are useful tools in gathering data as they are relatively inexpensive and easy to administer, tend to report reliable results, and refusals are significantly low. The UNRWA GYTS is a school-based tobacco specific survey which focuses on adolescents grades 7th to 9th grades. It assesses students' attitudes, knowledge and behaviours related to tobacco use and exposure to second hand smoke (SHS), as well as youth exposure to prevention curriculum in school, community programs, and media messages aimed at preventing and reducing youth tobacco use. The GYTS provides information on where tobacco products are obtained and used, and information related to the effectiveness of enforcement measures.

Given the fact that GYTS data in one Field of operation is not valid for the other Fields for socioeconomic and cultural reasons which are largely influenced by the country where the refugees are hosted, it was decided to undertake the survey in UNRWA schools in the five Fields of the Agency's areas of operations: Jordan, Syria, Lebanon, West Bank and Gaza.

The sample size for each Field was calculated by using standard protocol and software developed by CDC.

Jordan

A total of 1 668 students participated in the Jordan GYT, the school response rate was 100%, the student response rate was 87.9%, and the overall response rate was 82.4%.

Almost one-third of students currently use any form of tobacco; 12.7% currently smoke cigarettes, 13.2% currently use some other form of tobacco and nearly 1 in five students smoke the water-pipe (shisha) (Boys 25.4%, Girls 12.9%)Environmental Tobacco smoke (ETS) exposure is very high, more than six in ten students live in homes where others smoke in their presence; almost two-thirds are exposed to smoke in public places and more than half of students have parents who smoke. More than two-thirds of the students think smoke from others is harmful to them and more than eight in ten students think smoking in public places should be banned while almost three-fourths of smokers want to quit smoking. During the past 30 days previous to the survey, nearly two-thirds of students saw anti-smoking media messages; seven in ten students saw pro-cigarette ads on billboards and almost six in ten saw pro-cigarette ads in newspapers or magazines.

Syria

A total of 1 740 students participated in the Syria UNRWA GYTS with school response rate of 100%, student response rate of 95.9%, and the overall response rate of 95.9%.

The UNRWA-Syria GYT survey revealed that more than two in five students currently use any form of tobacco; 13.3% currently smoke cigarettes; 37.7% currently use other tobacco products and 31.2% of students currently smoke the water-pipe.

Exposure to Environmental Tobacco Smoke is very high as nearly two-thirds of students live in homes where others smoke, 67.6% of students are exposed to smoke in public places while four in five students think smoking should be banned in public places, two-thirds of students think that smoke from others is harmful to them and almost three-fourths of current smokers want to stop. During the past 30 days previous to the survey, about seven in ten students saw anti-smoking media messages, 72.3% of students saw pro-cigarette ads on billboards and nearly three in five students saw pro-cigarette ads in newspapers or magazines.

Lebanon

A total of 1 685 students participated in the Lebanon GYTS, the school response rate was 100%, the student response rate was 94.6%, and the overall response rate was 94.6%.

More than two in five students currently use any form of tobacco, 10.6% currently smoke cigarettes; almost 40% currently use other tobacco products and about one-third of students currently smoke the water-pipe. Exposure to Environmental Tobacco Smoke (ETS) is very high. almost seven in ten students live in homes where others smoke; almost two-thirds of students are exposed to smoke in public places and 80.4% of students think smoking should be banned in public places. About two-thirds of students think that smoke from others is harmful to them and about three in five current smokers want to stop; . During the 30 days previous to the survey, more than six in ten students saw anti-smoking media messages, more than three-fourths of students saw pro-cigarette ads on billboards and about two-thirds of students saw pro-cigarette ads in newspapers or magazines.

Gaza Strip

A total of 1 454 students participated in the Gaza Strip GYTS, the school response rate was 100%, the student

response rate was 96.4%, and the overall response rate was 96.4%. Following are the main findings of the Gaza GYT survey:

Almost one in four students currently use any form of tobacco, 5.7% currently smoke cigarettes, more than one in five currently use other tobacco products and 13.0% of students currently smoke the water-pipe. Exposure to Environmental Tobacco Smoke (ETS) is high – almost half of students live in homes where others smoke, more than two in five students are exposed to smoke in public places while more than four in five students think smoking should be banned in public places. Almost three in five students think that smoke from others is harmful to them and almost three-fourths of current smokers want to stop. During the 30 days previous to the survey, more than six in ten students saw anti-smoking media messages, about seven in ten students saw pro-cigarette ads on billboards and more than half of students saw pro-cigarette ads in newspapers or magazines.

West Bank

A total of 1 700 students participated in the West Bank GYTS, the school response rate was 100%, the student response rate was 94.0%, and the overall response rate was 94.0%.

Almost half of students currently use any form of tobacco, 21.7% currently smoke cigarettes 39.4% currently use other tobacco products and 30.5% of students currently smoke the water-pipe. Exposure to ETS is very high – two-thirds of students live in homes where others smoke and 65.2% of students are exposed to smoke in public places. More than three in five students think that smoke from others is harmful to them, about four in five students think smoking should be banned in public places and more than half of current smokers want to stop. During the 30 days previous to the survey, almost two-thirds of students saw anti-smoking media messages, more than seven in ten students saw pro-cigarette ads on billboards and about two-thirds of students saw pro-cigarette ads in newspapers or magazine.

Nutrition

Protein-calorie malnutrition and deficiencies in other nutrients such as iodine, vitamin A and iron is common among Palestine refugee population. In an effort to prevent nutritional deficiencies among the most vulnerable Palestine refugee population groups, UNRWA has since 1951 offered a nutrition and supplementary feeding programme targeting children, pregnant women, nursing mothers, tuberculosis patients and hospitalized patients.

The nutritional status of the Palestine refugee population is periodically assessed through surveys and through the regular nutritional surveillance systems in place at MCH clinics. The 1990 WHO/UNRWA survey revealed that protein-energy malnutrition had been eliminated and that mild to moderate iron deficiency anaemia was still highly prevalent among women of reproductive age and children. Consequently, UNRWA reoriented the objective of the Supplementary Feeding Programme, steering towards providing food safety nets to pregnant women and nursing mothers who have special physiological and nutritional needs in order to improve maternal nutrition and to avoid adverse consequences on the state of nutrition of newborn infants.

Supplementary Feeding Programme (SFP)

The Supplementary Feeding Programme provided food safety nets in the form of dry rations (comprising vegetable oil, rice, sugar and pulses) to pregnant women and nursing mothers beginning in the third month of pregnancy until 6 months after delivery. Entitlement to the Programme is based on medical certification by UNRWA health personnel, after verification of registration status. The programme in itself serves as an



incentive for the early registration of pregnant women for antenatal care, which is important for ensuring better health care and early detection and management of anaemia and other related causes of morbidity. The limitations of the Supplementary Feeding Programme are a direct result of declining financial/in-kind contributions to the regular food aid programme over the recent years. This has lead the Agency to assume austerity measures, reducing the food rations and leaving out certain beneficiary groups outside the scope of the Programme.

Moreover there is a continued need to improve programme efficiency introducing the following changes:

- The nutritional assistance to preschool and school children was discontinued over more than one decade;
- Since 2005, the number of rations/portions for nursing mothers has been reduced by 50% from 12 portions to 6 portions. The entitlement duration for the beneficiaries were changed to reflect a start date during pregnancy as of the third month gestation (previously it was five month gestation) and end date until six months post-delivery (previously it was twelve months post-delivery). These changes linking the number of portions with months of gestation contributed to improving early registration for antenatal care from 57.5% in 2005 to 65.8% during 2006 and to 72.1 in 2007 with positive impact on maternal and child health care;
- The previous self-selecting mechanism does not guarantee appropriate coverage of the most needy pregnant women and nursing mothers. Hence, further reform of the programme is envisaged to be a need based instead of the current status based criteria targeting only women under the absolute poverty line as identified by the Relief and Social Services assessment. During 2008 the SFP underwent through comprehensive revision and reform of the eligibility criteria based on the level of poverty establishing three categories of beneficiaries: beneficiaries who will fall below the abject poverty line will receive the same benefits as the SHCs – hence will be taken within the beneficiary rolls of the SHC programme; beneficiaries who will fall between the abject and absolute poverty lines will receive the food rations that will also be standardized with those of the SHCs; and beneficiaries who will be categorized as non-poor will not be eligible to receive assistance.

During 2008, a total of 85 450 pregnant women and nursing mothers compared to 112 256 in 2007 received preventive health care and supervision at UNRWA primary health care facilities and benefited from the Agency's food aid programme. This decline in the number of beneficiaries is the result of the new reform introduced as from October 2008.

Other Health Programme interventions:

- Enrichment of the food rations basket to include food commodities that provide protein from an animal source such as tuna and canned meat;
- Iron supplementation to pregnant women all through pregnancy;
- Iron supplementation for children aged 6-24 months in the West Bank and Gaza Strip;
- In coordination with the MoH Palestine authority children attending UNRWA health centres are provided with Vitamin A & D supplementation in the West Bank , Gaza Strip and Jordan; and
- Food commodities, in particular wheat flour and dry milk which were distributed by the Agency as part of its regular and emergency food aid programmes, were fortified with iron folate, and other trace



http://bbsnews.net/bbsn_photos/topics/middle_east_2008/2008021115_G.sized.jpg

Community Mental Health Programme

The objective of the Community Mental Health Programme is to promote and deliver a range of integrated community interventions aimed at improving the psychological and social wellbeing of Palestinian refugees consistent with the MDGs (specifically 3, 4 and 5), the Convention on the Rights of the Child (CRC) (specifically article 19, inter-alia) and the WHO Mental Health Policy and Service Guidance Package (WHO, 2003). Palestine refugees are among the most disadvantaged groups of the population. Since 1948 they have been suffering from the trauma of displacement. The present experience of conflict and violence only adds to the many wounds and scars marked in their psyche over the last six decades. UNRWA responded immediately to the psychosocial needs of the Palestinian community by implementing appropriate community-based mental health interventions. To fill this critical gap in services it became crucial to implement two psychosocial support programmes: one in Gaza and the other in the West Bank. The two programmes were funded through the emergency programme and were implemented as sector-wide activities involving UNRWA's Health, Education and Relief & Social Services Departments. The Mental Health programme started in 2002 as a psychosocial support project and involved the recruitment of a number of counsellors in Gaza and West Bank. As the programme perspective widened, an international expert was recruited in 2005 and it was re-named the Community Mental Health Programme. The programme in Gaza relies on 189 counsellors supervised by six assistant supervisors and administered by the training coordinator, administrative officer and three other supervisors. In the West Bank the programme is run by 110 counsellors supervised by six assistant supervisors and administered by three supervisors, a programme manager, a training coordinator, and an administrative officer. The counsellors work from UNRWA health centres, schools and community centres. Throughout 2008 the Community Mental Health Programme has offered frontline counselling and group interventions with the aim of improving the mental health and social wellbeing

of beneficiaries. Specifically it has offered school, community and clinic based activities for children, parents, individuals, families and groups. The activities conducted by the programme in 2008 are described by Field in the following pages.

The Gaza Strip

The year 2008 has been an extremely difficult year for refugees of Gaza Strip. The siege continued to be very strict with children being the mostly affected sector of the population. Toward the end of the year a massive Israeli Operation was launched re-tendering majority of the population in need for psychosocial help.

- The CMHP introduced life skills education in 15 schools and plans to expand it to more schools as the pilot phase proved to be effective;
- The CMHP revised the first edition of the Life Skills package and redesigned and produced the second edition which was supposed to be delivered during the second semester of 2008-2009, however, this was postponed due to the war;
- The supervisors and assistant mental health supervisors received further training on research methodology and analysis using statistical software; and
- A research proposal was developed by CMHP to study the students who could not pass their grades to study possible causes of their failure. This was a follow up of the CMHP work with students receiving summer learning which was done in cooperation with Education Department.

Counselling and mental health education activities:

Counselling and awareness activities comprise the majority of the counsellors' workload which are directed at children

and clients who have mild to moderate mental health problems. The counsellors hold individual and group counselling sessions using a variety of techniques.

Mental Health Interventions and Counselling

Counsellors at schools and health centres provide counselling for beneficiaries either in group or individually. At schools the students are referred by their teachers, families, or self referred. During the year 2008 MH counsellors conducted 41 513 counselling sessions and 4 863 home visits reaching 39 160 and 11 055 beneficiaries respectively.

Group Guidance Sessions (Mental Health Education for Students)

Sessions are generally conducted inside classrooms. Such sessions aim to increase students self care skills. They target all students regardless if they have MH problems or not. The CMHP counsellors worked in 172 schools over the last year with each student receiving an average of ten sessions per academic year. The sessions focus on dealing with stress, healthy studying methods, overcoming fear, violence, and other topics. During 2008 counsellors conducted 20 642 sessions reaching 864 804 beneficiaries.

Mental Health Education and public awareness meetings

These activities target adults as well as students. During the year 2008, a total of 3210 such meetings were carried

out reaching 67 943 beneficiaries. The sessions are either conducted at schools for parents, for refugees coming to PHC canters, and for public coming to community centres.

Working Students with Special Needs

The CMHP was involved in summer learning programme with education department to deal with students having very low academic achievements. The programme first focused on students who did not report to summer learning centres and found that a total of 2638 of students did not attend the summer learning, out of them 1417 (53.7%) reported back to schools after counsellors intervention. The main reason for drop out from summer learning include: Child Labour in 339 (27%) cases, family problems in 412 (33.7%) while other reasons were identified such as lack of motivation, low IQ, early marriage, family refusal, and travel outside the Gaza Strip. Additionally; 2657 students had un-expected failure with associated adjustment problems due to variety of reasons like; lack of family interest; the new exam system, lack of motivation, and difficult curriculum. Plans are in place to follow them up during the scholastic year 2008-2009.

Respect and Dignity in Violence Free Schools Initiative

The CMHP is taking a role in the initiative. The initiative started by a visit to Yemen where UNRWA team had deep look into the a project implemented by Save Children Sweden and Yemeni Ministry of Education. The lessons learned from Yemen will be reflected on a manual that will be used in the training of school teams.

Table 16 - Number of sessions of mental health counseling and beneficiaries during the year 2008

	Individual counselling sessions	Group counselling	Group guidance (awareness)	Public awareness meetings	Home visits
No of activities	30 036	11 477	20 642	3210	4863
Beneficiaries	11 042	28 118	864 804	67 943	11 055

Emergency Interventions

The CMHP responded to three major emergencies during 2008. the first one after Bureij Camp bombing in Feb 2008, the second in March 2008 at north area especially Jabalia camp, and lastly during the war at the end of the year. The impact and UNRWA's early response to the war in the Gaza Strip is discussed in detail in Chapter 6.

Burej Camp Explosion

On 15 February, a huge explosion rocked El-Bureij refugee camp in the central Gaza Strip. The explosion that destroyed a house in El-Bureij refugee camp, resulting in the death of 8 people, including 5 children (one UNRWA student), and injury of dozens (PCHR.ORG). The incident shocking the whole area prevented majority of students from reporting to schools (up to 60% 1st day and 50% 2nd day after the explosion). The CMHP surveyed El-Bureij Camp Schools (9,259 students) and found 314 students directly exposed to traumatic events with 238 reporting partial home damage; 21 reporting death of close relative; 16 being wounded, 80 having close relative wounded; 12 students having their homes totally destroyed and 6

having the home of their close relatives totally destroyed. Among these students 90 reported exposure to more than one traumatic incident. Moreover 68% (217) had significant PTSD symptoms warranting prolonged interventions. Students were provided with necessary counseling and support.

North Area Invasion

After the Israeli Operation at the beginning of March in the north area, using same protocol, the UNRWA mental health programme screened the 39,000 students studying in UNRWA schools to see the extent of exposure and reactions to the traumatizing events. It was found that 790 students were exposed to various traumatic events with witnessing mutilated bodies the most common type (199 students). Additional 281 reported a relative killed and 101 students had partial home damage. After putting them in groups and providing psychosocial support; 94% of them show significant posttraumatic reactions and potential for development of PTSD.

Common mental health problems

The most common mental health problems identified during 2008 are shown in Table 17.

Table 17 - common mental health problems

	Disorder	Group Counselling	Individual Counselling	Total	Percentage
1	Peer Violence	2391	3909	6300	17.158%
2	Lack of Motivation	1654	2439	4093	11.147%
3	Family Problems	178	2679	2857	7.781%
4	Bed Wetting	116	2584	2700	7.353%
5	Truancy	719	1322	2041	5.559%
6	Fear	261	1359	1620	4.412%
7	Attention Deficit	454	1107	1561	4.251%
8	Theft	280	1203	1483	4.039%
9	Acute Trauma Reactions	321	760	1081	2.944%
10	Hyperactivity	309	737	1046	2.849%
11	Messiness	507	483	990	2.696%
12	Bad Studying Habits	503	283	786	2.141%
13	Inappropriate Language	356	404	760	2.070%
14	Anxiety	162	584	746	2.032%
15	Bad Company	224	298	522	1.422%
16	Inappropriate sexual Behavior	96	421	517	1.408%
17	Shyness	64	402	466	1.269%
18	Social Isolation	55	408	463	1.261%
19	Learning Disability	0	460	460	1.253%
20	Low Self esteem	51	372	423	1.152%

Capacity Building

Throughout the year the CMHP continued to deliver training for the mental health professionals both using supervision and through formal training workshops and courses. The majority of the training is implemented using local resources with some inputs from academic institutes and universities.

Coordination Networking and advocacy

The CMHP is strongly involved in coordination body for psychosocial and mental health activities. During emergencies CMHP co-chair the sector with UNICEF where the programme mental health supervisors act as focal point for other agencies. They help in developing area level plans to prevent duplication of activities. CMHP also hosts such coordination meetings with MH supervisors facilitating the discussions and cooperation, in most occasions with attendance from UNICEF.

CMHP also represents UNRWA at UN agencies regular meetings and updates OCHA office in Gaza with findings that has been used to document mental health and psychosocial impact.

The CMHP participated in the International Conference on Primary Health Care (PHC), Doha Qatar where a paper titled "Determinants of Mental Health in Palestine" was presented

Research

During the last academic year a survey was conducted to assess students reporting exposure to significant traumatic life events, 172 UNRWA schools were included and came out with the following:

14 students were killed and 37 were injured; 335 students had their father killed during Israeli Army operations while 362 students lost their father due to natural causes, 58 students had their mother killed while 225 lost their mothers from natural causes, 71 had at least one of their brothers killed and 37 lost their brothers from natural causes, 894 students had one of their family members killed, 186 students lost their homes and 1376 had one of their family members injured

West Bank

The Community Mental Health programme implements its activities in coordination with the main three departments: Health, Education and Relief & Social Services. To enhance the process of integration, 46 Psychosocial Counsellors-schools were transferred to the Education Department. They are be working under the full authority and supervision of the Education Department with a ratio of one counsellor every 900 students,

The Psychosocial counsellor-clinics (21) are working under the administrative supervision of the Health Department; where as the professional supervision remains with CMHP. All Psychosocial counsellors-community (30) are under the administrative and professional supervision of the CMHP. Since September 17th 2007, Professor Muhammad Haj Yahia has been appointed as the coordinator of the Community Mental Health Programme in the West Bank. Our new strategy is a community focused one. It has allowed us to intensify our community oriented activities, community organization, community activation, community empowerment, community development, community planning, community education and community advocacy, and ultimately to enrich the well-being and mental health of the refugee community.

CMHP achievements

CMHP witnessed certain developments in this period which has affected the running of the programme within its staff and in relation to our stakeholders whether inside UNRWA; or outside it. CMHP gained a better positive reputation both at UNRWA level and at community level. Its activities are better well known and wide spread at all community facilities, very good links with UNRWA departments as well as organization and NGOs working in the same domain.

Psycho-educational activities

These activities target adults as well as students. During the year 2008, a total of 200 open days, 28 theatres, 20 summer camps and 32 celebration days were conducted. The sessions are either conducted at schools for parents, for refugees coming to PHC canters, and for public coming to community centres.

Counselling activities

Mental Health Interventions and Counselling : Counsellors at health centres and community centres provided group or individual counselling. During 2008 counsellors conducted 5242 individual counselling sessions for 2997 beneficiaries and 716 group counselling targeting 12 617 beneficiaries.

Group Guidance Sessions and public awareness meetings

During 2008 counsellors conducted 2,703 sessions of group guidance and public awareness meetings reaching 85 704 beneficiaries.

Referral

During 2008, a total of 110 cases were referred to specialists or specialized centres for further treatment.

Voluntary Work

The programme has already prepared comprehensive and professional plans to use volunteers in providing our services. The programme will recruit and train the needed volunteers from university students, professional and labour unions, experts in different professions like teachers, social workers, doctors, and nurses as well as retired professionals.

Coordination and cooperation

CMHP is very keen to establish very good relations with UNRWA departments, we have strengthened our cooperation with the Area Officers, Camp Service Officers and Medical Officers.

In addition, cooperation with external institutions have been witnessed CMHP professional and administrative teams have been exerting their best efforts to ensure a comprehensive and integrative community mental health services and programmes with the existing health, education, social, and cultural programmes of the different institutions and NGOs working in and out of Palestine.

Relations with local universities: CMHP supervisors initiated coordination with universities in order to have and host trainees in the social work and psychology fields of study to be trained in our programme by our counsellors and supervisors. Currently the programme is preparing a well-organized plan to start a systematic and well-organized student's trainee's programme.

Capacity building

In line with CMHP plans for capacity building an in-house training workshops were conducted by supervisors to upgrade the knowledge and skills of counsellors .

A training needs analysis process was implemented by forming focus groups of counsellors and supervisors and a simple needs assessment questionnaire was completed. After analysis of the data obtained a training programme was developed for counsellors and supervisors in each area.

Training of counsellors

Training of counsellors is usually conducted by their supervisors. They conduct two kinds of sessions, individual and group. The monthly supervision counsellor training is a combination of communication and self awareness skill and intervention skills exercises.

Table 18 - Counseling activities by CMHP West Bank

	Individual counselling sessions	Group counselling	Group guidance (awareness)	Public awareness meetings	Referral
No. of activities	5242	716	1111	1592	0
No. of beneficiaries	2997	12 617	37 551	48 153	110



Disease Prevention and Control

The increasing prevalence of non-communicable diseases is a serious challenge, where the success in extending life expectancy is translated into a real threat to global health.

WHO, Annual Report, 2007

Programme Goal

The objective of the Agency's disease prevention and control programme is to reduce morbidity, disability, and mortality from communicable and non-communicable diseases consistent with WHO targets and recommended intervention strategies

Programme profile

- UNRWA employs an active system of epidemiological surveillance of communicable diseases, including vaccine-preventable diseases and is committed to implementation of the United Nations Millennium Development Goals as well as WHO targets for eradication of poliomyelitis, elimination of neonatal tetanus, reduction of mortality from measles. UNRWA is also committed to combating communicable diseases of public health importance including implementation of the WHO directly observed treatment, short course strategy (DOTS) for control of tuberculosis;
- Close coordination is maintained with the Ministries of Health of the Host Authorities for surveillance of communicable diseases, supply of vaccines, exchange of information, participation in national immunization days and mass immunization campaigns, outbreak investigation and laboratory surveillance of HIV/AIDS and other communicable diseases, which require advanced virological or immunological investigations that cannot be performed at UNRWA facilities;
- Control of non-communicable diseases is offered as an integral part of the Agency's primary health care activities with special emphasis on diabetes mellitus and hypertension. Specialized care for cardiovascular diseases is provided by specialists who visit health centres according to a weekly rotating schedule and advice on the management of patients referred to them by health centre medical officers; and
- UNRWA's approach towards prevention and control of non-communicable diseases is based on the at risk strategy because the Agency does not have the means to embark on a population-based strategy of primary prevention as it has no control over effective means for dissemination of knowledge and public awareness including national educational curricula and mass media.

Progress in 2008

Control of communicable diseases

Incidence trends

Similar to previous years, there were no cases of poliomyelitis, tetanus, diphtheria, or pertussis among the refugee population during 2008 (table, 3). Two non polio cases were reported, one from Lebanon, the other from West Bank Field with provisional diagnosis of “Guillian- Barre Syndrome” and finally as “Transverse Myelitis”.

Overall incidence rate of measles Agency-wide was 1.3 per 100,000 populations, almost the same in 2007 at 1.4/100,000. Rubella’s incidence rate decreased from 1.9 per 100,000 populations in 2007 to 1.6 per 100,000 in 2008, with most of the reported cases from Jordan at 3.2, /100,000. In the line of WHO recommendation for elimination of these two diseases by 2010 more work needs to be done to ensure full vaccination coverage and confirmation of suspected cases beside the appropriate management of confirmed cases.

Incidence of mumps at 22.0 per 100 000 populations during 2008 is double the incidence of 2007, which is explained by the outbreak that took place earlier in 2008 in Lebanon with incidence rate of 220.4 per 100,000 population. The other Fields showed different incidents rates as follows; 13.5/100,000 from Syria 7.5/100,000 from West Bank, 4.9/100,000 from Jordan and 1.8 /100,000 population from Gaza.

Viral meningitis was reported at incidence rate of 2.9 per 100,000 populations with highest rate from West Bank, mainly from Qalqilia hospital at 12.9/100,000. Gaza field reported 1.8 /100,000, while other fields were below 1/100,000 population.

Tuberculosis control

Close cooperation was maintained between UNRWA and national tuberculosis programmes. A total of 73 cases were newly diagnosed in 2008 Agency-wide with increase of 8 cases from the year 2007 , out of these cases , 25 (34.2%) were pulmonary smear positive, 10 (13.6%) were pulmonary smear negative and 38 (52.2%), were extra pulmonary cases. Most detected

cases were reported from Syria with a total of 45 cases (61.6%), followed by Lebanon with 14 cases (19.2%), Jordan with 8 (11.0%), Gaza and with five (6.8%) and only one case (1.4%) was reported from the West-Bank Field. Detection rates in all Fields continued to be below the WHO-recommended target of 70% of expected number of cases for the country except for Syria field which showed great improvement and the only Field that was above the WHO target. Using the directly observed treatment, short course strategy (DOTS), all Fields achieved 100% cure rate.

Immunization coverage

Coverage of the expanded programme on immunization among children below 2 years of age was measured through rapid assessment technique.

The assessment revealed that the target of sustaining above 95% coverage, both for the first year primary and second year booster series was achieved in all Fields. As illustrated in table 1 below, the coverage of primary vaccines reached 99.6% which is above the achieved in 2007 (98.7%), while the second year vaccination coverage also improved from 98.6% in 2007 to 99.4% in 2008, due the availability of the vaccines through out the year the enforcement of appointment system and continuous follow up of defaulters by health centres staff.

In 2008, the Gaza Strip conducted a study to determine if the high vaccination coverage reported each year by UNRWA corresponded to valid vaccinations (ie, those administered in accordance with the schedule recommended by WHO [1]). The results indicated that 95% of children were validly protected with all antigens by the age of 12 months after the evaluation of vaccination records and 98% after combining the analysis of records with the patient history. No UNRWA Health Centre in the Gaza Strip had a valid coverage rate for all antigens administered by the Programme below 96% (analysis of vaccination records). 2% of children received invalid measles immunizations. This was due to the fact that the vaccine was administered too early. The study confirms that high vaccination coverage reported by the Agency for all antigens provided, was administered correctly to UNRWA beneficiaries and is a reliable indicator of their level of protection against vaccine preventable diseases.

Table 1 - Coverage of the expanded programme on immunization 2008 based on the rapid assessment technique

Vaccine	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Coverage rates as percentage of infants 12 months of age						
BCG	99.9	100	100	100	100	100
Poliomyelitis	99.5	100	100	100	99.7	99.7
Triple (DPT)	99.6	100	100	100	99.7	99.8
Hepatitis	99.5	100	99.5	100	99.7	99.7
Hib	99.7	100	99.6	100	99.7	99.8
Measles	99.1	100	99.5	100	99.7	99.6
All vaccines	99.1	100	99.5	100	99.7	99.6
Coverage rates as percentage of children 18 months old, for booster doses						
Poliomyelitis	98.7	99.7	99.6	100.0	100.0	99.4
Triple (DPT)	98.7	99.7	99.3	100.0	100.0	99.4
MMR	98.7	99.7	99.3	100.0	100.0	99.4

Mass immunization campaigns

In cooperation with MoH Lebanon and UNICEF Lebanon, UNRWA conducted two rounds of the National Measles, Rubella and Mumps (MMR) vaccination campaign in 2008, the first from 31 March-12 April and the second from 29 April-03 May. Children 0-5 years of age were enrolled. In Jordan, in cooperation with the MoH, two rounds of polio vaccination campaign were conducted targeting children 0-5 years of age in the Jordan Valley.

Disease outbreaks

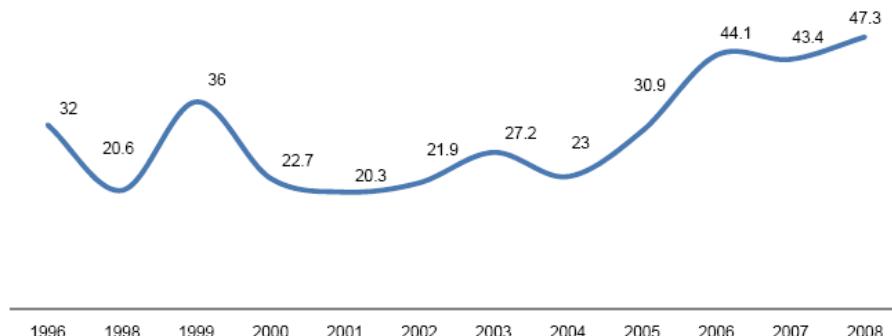
One mumps outbreak was reported from Lebanon during 2008. A total of 521 mumps cases were reported from various health centres, 300 of which from E/ Hilweh

camp H/Cs. 68% of cases were males and 32% were females. Further analysis revealed that 30% of cases were not vaccinated and 49% of cases were between the ages of 9-13 years, which may be explained by secondary vaccination failure.

Other communicable diseases

Viral hepatitis

Figure 1, shows the incidence rate of reported viral hepatitis cases (mainly hepatitis A) Agency-wide during the last 10 years. As seen from the figure, increase in the reported incidence rates during 2008 is slightly higher than that in the previous 2 years which is due to the improvement in the surveillance and reporting activities. More attention needs to be paid to this disease in term of prevention by maintaining good hygienic conditions.

*Figure 1 - Incidence rate of reported viral hepatitis (per 100,000) Agency-wide, 1998-2008*

HIV/AIDS

Only one case of HIV/AIDS was reported during 2008 from Lebanon Field. The cumulative number of laboratory-confirmed cases of HIV/AIDS among refugees reported Agency-wide up to 2008 was 146 cases, of which 26 from Jordan, 25 from Lebanon and 14 from Syria. Gaza and the West-Bank Fields reported 20 and 61 cases respectively, among both refugees and non-refugees.

Brucellosis

The incidence of brucellosis decreased from 10.3 per 100,000 in 2007 to 7.1 in 2008 .The highest incidence rate is still reported, from Syria at 53.5. Incidence rate from other Fields is negligible.

Typhoid fevers

The incidence of typhoid fevers Agency-wide decreased from 13.0 per 100 000 population in 2007 to 5.5 in 2008. However, this decrease may be explained by poor surveillance activities and low referral of suspected cases to laboratory for further confirmation of diagnosis. More attention needs to be given to confirmation of diagnosis and follow up of suspected cases. The highest incidence at 18.6 per 100 000 population was observed in Syria followed by Gaza at 10.6 while West Bank Field showed zero incidence.

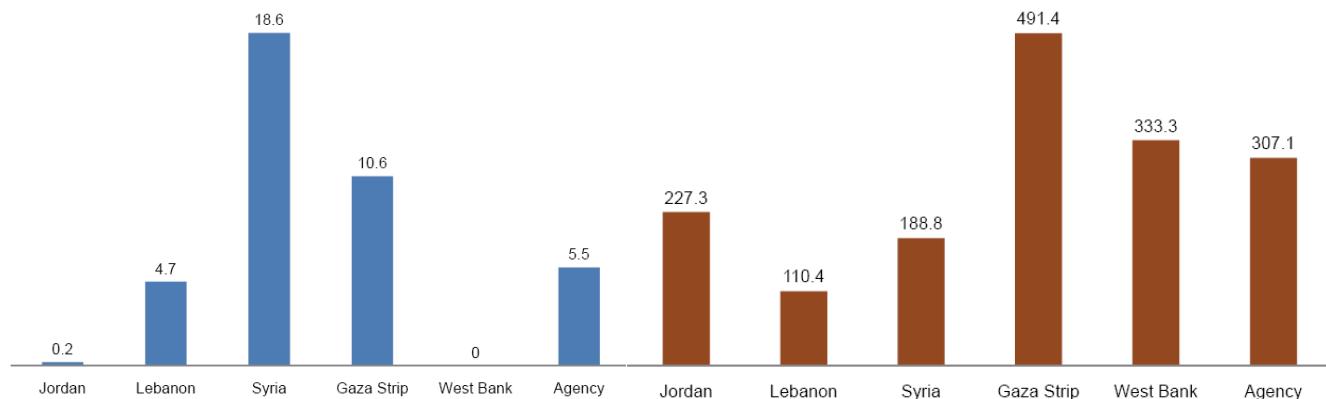


Figure 2 - Incidence rate of reported Typhoid fever (per 100,000) by Field, 2008

Bloody diarrhoea

The incidence of bloody diarrhoea Agency-wide is 307.1 per 100,000 populations with significant variations between Fields. Figure 3 shows the incidence rates of bloody diarrhoea per 100,000 populations, by Field during 2008.

The highest incidence rate was reported from Gaza Field with 491.4 per 100,000 populations which may be explained by poor water quantity and quality in addition to the frequent technical problems with water stations and power supply cut-offs due to the prolong closure of borders, followed by the West Bank and Jordan with 333.3 and 227.3 respectively, the lowest rates were seen in Syria and Lebanon with 188.8 and 110.4 respectively.

Other communicable diseases

Table 2 shows the incidence rates of reported communicable diseases from all Fields. No cases of poliomyelitis, cholera, diphtheria, *tetanus neonatorum*, or pertussis were reported.

Figure 3 - Incidence rate of reported bloody diarrhoea (per 100,000) by Field, 2008

Table 2 - Incidence rates of reported cases of communicable diseases per 100,000 served population during 2008

Disease	Jordan	Lebanon	Syria	Gaza Strip	West Bank	All
Acute flaccid paralysis*	0.0	0.4	0.0	0.0	0.2	0.07
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0
Cholera	0.0	0.0	0.0	0.0	0.0	0.0
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal meningitis	0.0	0.0	0.0	0.5	0.4	0.2
Meningitis – bacterial	0.1	0.0	0.3	0.2	4.4	0.9
Meningitis – viral	0.3	0.4	0.9	1.8	12.9	2.9
Tetanus neonatorum	0.0	0.0	0.0	0.0	0.0	0.0
Brucellosis	2.0	4.7	53.5	0.2	0.6	7.1
Bloody diarrhoea	227.3	110.4	188.8	4914.3	333.3	307.1
Viral hepatitis	19.9	55.0	81.5	81.0	23.7	47.3
HIV/AIDS	0.0	0.4	0.0	0.0	0.0	0.1
Leishmania	0.5	0.0	83.6	0.0	0.4	9.3
Measles**	1.4	0.8	0.6	0.1	3.9	1.3
Gonorrhoea	0.3	0.0	0.0	0.0	0.0	0.1
Mumps	4.9	220.4	13.5	1.8	7.5	22.0
Rubella**	3.2	0.4	1.2	0.1	1.3	1.6
Tuberculosis, smear positive	0.2	1.3	4.5	0.5	0.2	0.8
Tuberculosis, smear negative	0.1	1.7	1.5	0.0	0.0	0.3
Tuberculosis, extra pulmonary	0.5	0.3	7.5	0.1	0.0	1.2
Typhoid fevers**	0.2	4.7	18.6	10.6	0.0	5.5

* Among children <15 years ** Include suspected and confirmed cases

Control of non-communicable diseases

Diabetes and hypertension

Strategy

Due to limited financial and human resources, the Agency's focus is placed on the at-risk approach in respect of hypertension and diabetes mellitus. The intervention strategy consists of three elements.

The first is community health education (primary prevention), to promote healthy life-styles including weight control and adherence to healthy balanced dietary patterns to avoid obesity and high lipid levels, regular dynamic physical exercise, reduction of salt intake, increased fruits and vegetables intake, and avoidance/cessation of smoking.

The second element (secondary prevention), for early detection of diabetes and hypertension by active screening of individuals at risk of developing diabetes and/or hypertension which include; overweight persons ($BMI > 25$) or obese ($BMI > 30$), those with positive family history for diabetes, hypertension, cerebrovascular or cardiovascular disease, all pregnant women and women with obstetric history associated with preeclampsia/eclampsia, miscarriages or stillbirth, women with either past history of gestational diabetes or hypertension or delivery of big babies, persons at > 40 years of age.

The third element (tertiary prevention) which concentrate on effective case-management of patients suffering from diabetes mellitus and hypertension to achieve acceptable blood pressure, glycaemia and lipid control, and education of patients on all aspects relevant to self-care, with concentration on close monitoring and management in accordance with the technical guidelines and standard management protocols.

All persons with confirmed diagnosis of diabetes and/or hypertension are referred to be registered at the NCD clinic and a special patient registration file (PRF) is opened, where assessment of the health status is completed during the first visit.



For simplicity and practical reasons, the PRFs are kept in three separate groups, PRFs for patients with diabetes mellitus only (type 1 & type 2), PRFs for patients with hypertension only, and PRFs for patients with both, diabetes mellitus and hypertension.

The patients are stratified according to their control status for frequency of medical consultations, through appointed visits, the patients are subjected to clinical, and laboratory investigations including blood cholesterol (triglycerides, LDL and HDL on needs), blood glucose, and creatinine, to evaluate the health status. The results of the assessment are recorded in the patient registration file (PRF).

For practical reasons, post-prandial plasma glucose tests (2-hr PPG), and blood pressure measurements are used to monitor the control status of patients with diabetes and hypertension. For diabetes; if two of the last three PPG are $< 180\text{mg/dl}$ (10mmol/l), in some conditions two of the last three fasting plasma glucose tests are as (FPG) $< 140\text{ mg/dl}$ (7mmol/l), then patient is considered with glycaemia control. For hypertension, control status is considered if systolic blood of $< 140\text{ mmHg}$ and diastolic blood pressure of $< 90\text{mmHg}$ in the measurement of last visit and one of two measurements taken during the preceding schedule visits.



Non-communicable diseases patients

By the end of 2008, a total of 177 283 patients were registered at NCDs clinics with diabetes and/or hypertension in the five Fields of UNRWA's area of operations, 56 176 patients were under care in Jordan representing 31.7% of the total patients, while 49 528 (27.9%) in Gaza, 28 909 (16.3%) in West-Bank, 22 536

(12.7%) in Syria, and 20 134 (11.4%) in Lebanon.

The total number of patients with hypertension without diabetes is 82 542 which represent 46.6% out of the total registered patients in the five Fields.

Table 3 shows the distribution of registered NCDs patients by end of 2008 by Field and type of disease.

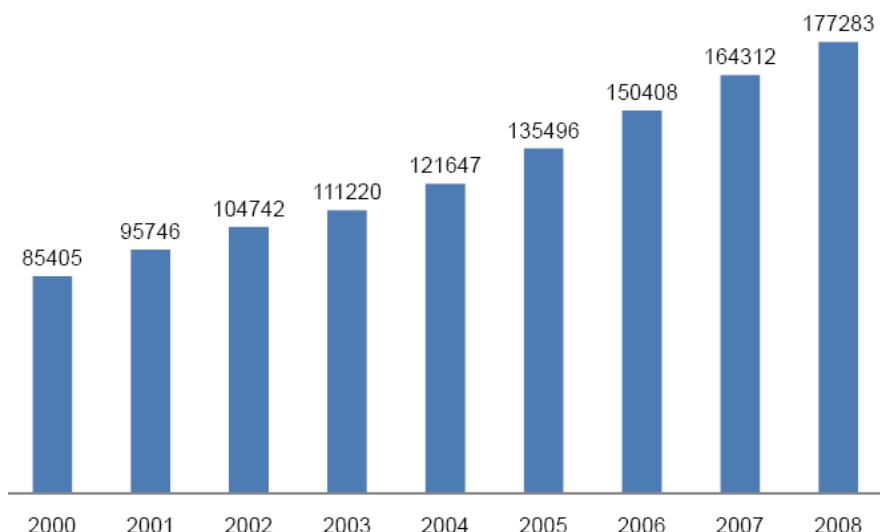


Figure 4 - Numbers of patients with diabetes and/or hypertension under care at the NCD clinics in the five Fields from 2000-2008

Prevalence rates

The prevalence of diabetes mellitus and hypertension among the served population at ≥ 40 years of age was 10.7 and 16.4% respectively which increased compared with 2007. This may be explained by better calculation of population served and improved detection rate due to screening programme and efforts exerted by health staff.

Prevalence of diabetes mellitus

Figure 5 shows, that the prevalence of diabetes mellitus disease among served population at 40 years of age at 10.7% Agency-wide, with the highest rates at 12.7% in Gaza, followed by the West Bank with 11.1%, Syria at 10.9%, Lebanon at 10.1% and Jordan with the lowest rate of 9.3%.

By the end of 2008, a total of 177 283 patients were registered at NCDs clinics with diabetes and/or hypertension in the five Fields of UNRWA's area of operations, 56 176 patients were under care in Jordan representing 31.7% of the total patients, while 49 528 (27.9%) in Gaza, 28 909 (16.3%) in West-Bank, 22 536 (12.7%) in Syria, and 20 134 (11.4%) in Lebanon.

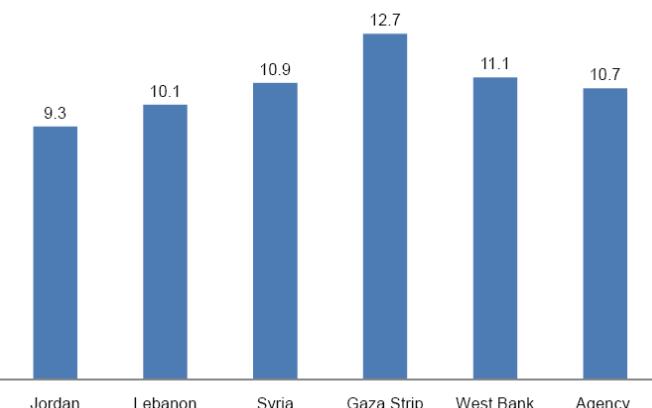


Figure 5 - Prevalence of diabetes among served population of 40 years of age or more by Field, 2008

Prevalence of hypertension

Figure 6 shows, that the prevalence of hypertension disease among the served population at ≥ 40 years of age was 16.4% Agency-wide with the highest rate in Lebanon at 19.9%, followed by Gaza at 18.9%, Syria at 18.5%, the West Bank at 15.3%, and Jordan with the lowest rate of 13.8%.

It is important to note that the rates refer to prevalence among those refugees, attending UNRWA clinics and not the general refugee population. Studies in host countries revealed much higher rates.

Table 3 - Patients with diabetes and/or hypertension by Field and type of morbidity

Morbidity type	Jordan	Lebanon	Syria	Gaza Strip	West Bank	All
Diabetes mellitus type I	1109	195	390	875	559	3 128
Diabetes mellitus type II	8983	2 132	3 299	10 277	5 559	30 250
Hypertension	24 411	11 167	11 108	23 881	11 975	82 542
Diabetes mellitus & hypertension	21 673	6 640	7 739	14 495	10 816	61 363
Total	56 176	20 134	22 536	49 528	28 909	177 283

Age and sex distribution of patients under supervision at NCD clinics

Table 4 provides data on the distribution of patients with diabetes and/or hypertension who were under supervision at the end 2008 by age group and gender. 91% of patients were above 40 years of age, and 63.0% were females.

Gender distribution is largely affected by the attendance pattern at UNRWA health facilities and not by significant variations in morbidity profiles. The prevalence of diabetes mellitus and hypertension among the served population at ≥ 40 years of age was 10.7 and 16.4% respectively which increased compared with 2007. This may be explained by better calculation of population served and improved detection rate due to screening programme and efforts exerted by health staff.

Type of management

There are significant variations between the Fields in relation to the type of management among patients with diabetes type 2 and hypertension.

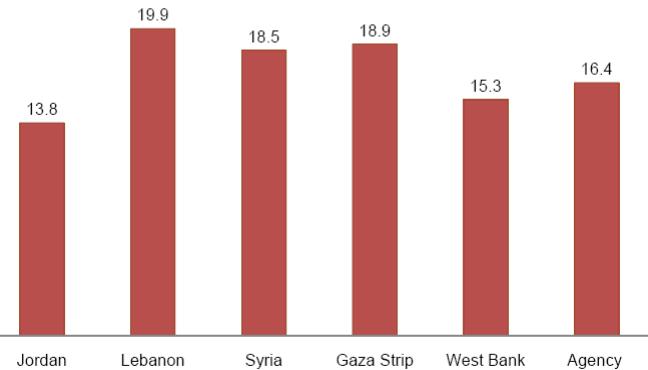


Figure 6 - Prevalence of hypertension among served population 40 years of age or older by Field, 2008

Management of patients with hypertension

Table 5 shows the variation between Fields in percentages of patients with hypertension on lifestyle only (non-pharmacological type of management) for 2007 and 2008, there is either a drop or sustaining in percentages of patients suffering from hypertension in all Fields during 2008.

Table 4 - Distribution of patients with diabetes & hypertension by age & sex, 2008

Type of disease	Diabetes mellitus Type I	Diabetes mellitus Type II	Hypertension	Diabetes & hypertension	Total
No. of patients at end of 2008	3 128	30 250	82 542	61 363	177 283
Age distribution (percentage)					
Below 20 years	30.0	0.0	0.2	0.0	1.0
20–39 years	56.0	10.0	10.0	3.0	8.0
40–59 years	14.0	61.0	46.0	42.8	46.0
60 years & above	0.0	29.0	44.0	55.0	45.0
Total	100	100	100	100	100
Sex distribution (percentage)					
Male	51.0	43.0	35.0	35.0	37.0
Female	49.0	57.0	65.0	65.0	63.0
Total	100	100	100	100	100

Table 5 - Hypertensive patients on non-pharmacological management (lifestyle only) by Field, 2007-2008

Field	% of Lifestyle management only	
	2007	2008
Jordan	1.0	1.0
Lebanon	5.0	2.0
Syria	2.0	2.0
Gaza Strip	8.0	8.0
West Bank	5.0	3.0
Agency	4.0	3.0

The highest percentage reported from Gaza Field at 8%, followed by the West-Bank at 3% then Syria and Lebanon with 2% and the lowest was in Jordan with 1%.

Percentages of patient with diabetes on insulin

Figure, 7 shows the proportion of patients with diabetes including type 1 diabetic patients who used insulin as part of their management by Field in 2008.

Variations between Fields are noted in insulin use which is related to different levels of acceptance and compliance of patients to use insulin beside the fact that not all medical officers are abiding by technical instructions in managing uncontrolled diabetic patients. Jordan has the highest percentage with 34.3% of diabetic patients treated with insulin, followed by Gaza and Lebanon with 30.9%, each, the West Bank with 26.8% and Syria at 21.3%.

Risk Scoring

A modified scoring system from WHO-CVD Risk Management Package was used. All patients registered in NCDs clinics were assessed in relation to risk scoring during 2008. The objective behind this is to stratify patients, by level of risk of developing further



complications and subsequently develop management protocols for each category.

Table 6, shows the result of the assessment. The high risk is noticed among patients with diabetes and hypertension at 23.4 %, followed by patients with hypertension at 22.7% due to increase of some risk factors such as smoking, hyperlipidemia and physical inactivity following cerebrovascular accidents. 13.5% of Patients with type 2 diabetes were at high risk.

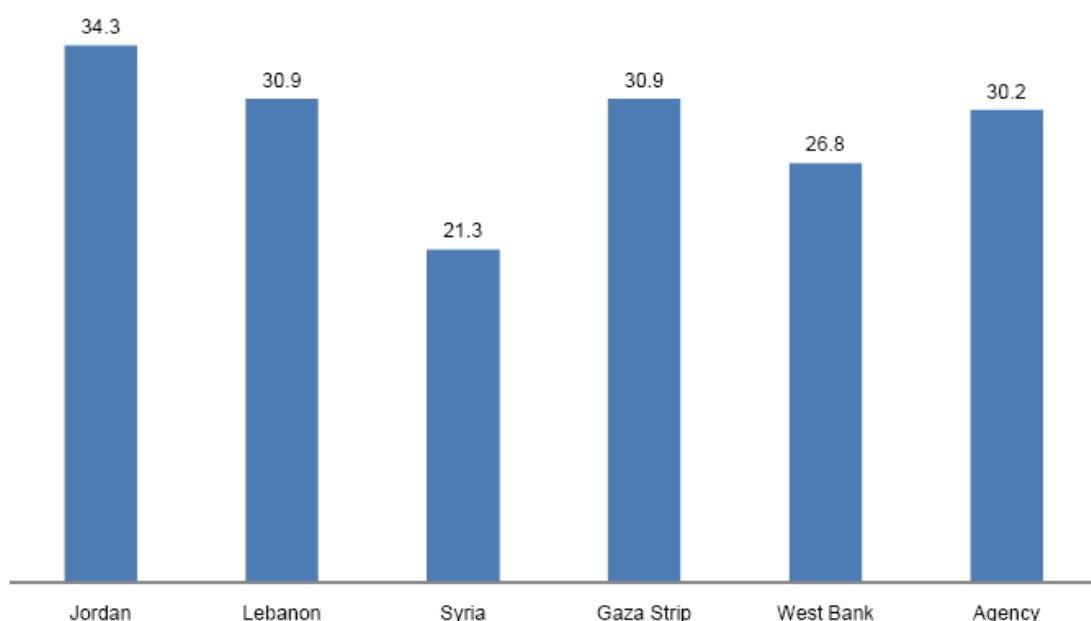


Figure 7 - Percentage of diabetic patients on insulin, 2008

Percentage of late complications among NCDs patients

The NCD module of Management Health Information System was used to assess the control status and late complications rates among NCDs patients. A sample size of 10% of all registered patients of the diseases was analyzed. Table 7 shows the percentages of reported late complications; CVD (myocardial infarction, stroke and congestive heart failure related to diabetes and/or hypertension), end stage renal failure (ESRF), above ankle amputation and blindness.

The reported complications are still behind the expected rates of 12-15%, while variations in relation to the type of chronic disease follow the same epidemiological trends in previous years.

In 2008, the feet of a round 300 diabetic patients were examined for skin colour, ulcers, colloids, nails, deformities, pulse, leg temperature, superficial and deep sensation and shoes suitability in the West Bank Field . 138 of the diabetic patients were found to have foot problems. Patients were counselled on their individual situation and those requiring physiotherapy were treated. Comprehensive feedback was provided to concerned medical officers.

Defaulters

The reported number of defaulters (patients who did not attend the NCD clinic for a calendar year for follow up and/or collection of medicines by themselves or relatives) amounted to 9423, which represent 5.7% of total patients under supervision.

Table 6 - Percentages of risk status by type of disease

Type of disease	Diabetes mellitus Type I	Diabetes mellitus Type II	Hypertension	Diabetes & hypertension
Low risk	70.2	31.5	17.6	21.8
Moderate risk	27.1	55.0	53.8	54.8
High risk	2.7	13.5	22.7	23.4

Table 7 - Percentages of late complications by Field and type of diseases, 2008

Field	Type of Disease			Total%
	Diabetes	Hypertension	DM & HTN	
Jordan	6.9	8.6	14.5	10.3
Lebanon	8.6	8.9	17.9	11.8
Syria	11.8	12.4	21.2	14.0
Gaza Strip	7.2	10.3	17.8	11.3
West-Bank	8.4	7.7	12.5	8.9
Agency	7.2	9.5	16.1	9.1

Table 8 - Mortality rates by Field, 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Number of deaths	878	491	449	669	520	3007
% of all NCD patients	1.7	2.5	2.1	1.5	2.0	1.8

Table 9 - Distribution of defaulters by Field, 2008

Defaulters	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Number	3542	1240	1331	1488	1822	9 423
Percentages out of remaining 2007	6.8	6.3	6.2	3.3	6.9	5.7

This percentage is larger than the 2007 year which calls for concern. Despite health staff's efforts to follow-up on defaulters, utilizing all available means including home visits, telephone calls, notification through family members and others, there is still an area for further improvement. The highest rate of defaulters was reported from West Bank and Jordan at 6.9% and 6.8% respectively.

The health programme needs to strengthen counselling and education of patients as cornerstones to overcome problems of non-attendance.

Mortality

A total of 3,007 deaths, which accounted for 1.8% of all non-communicable disease patients were registered at the beginning of 2008. 51.1% of them had diabetes with hypertension, 34.5% had hypertension, and 14.4% were diabetics.

Table 9 below shows variations between Fields regarding the reported death rate: highest rates were reported from Lebanon and Syria (2.5%, 2.1% respectively) and the lowest from Jordan with 1.7%.

Breakdown of mortality data Agency-wide by type of disease revealed that the highest mortality rate was among patients with diabetes associated with hypertension at 2.5% followed by patients with hypertension at 1.4% and the lowest was among patients with diabetes at 1.3%, (Table 10).

The burden of diabetes and hypertension is on increase and it will continue to draw on the scarce Agency resources. It is therefore, essential to ensure that these diseases are properly managed ahead the need to meet the high cost of treating their complications and disabling effects.



The programme future vision is directed to improve the quality of services in line with UNRWA's organizational development main objective (to serve Palestine refugees more effectively and efficiently), increase the percentage of control rate and improve early detection and prevention of complications as much as possible through proper case management.

Table 10 - Disease-specific mortality rates among reported death cases by Field, 2008

% by disease	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Diabetes	0.9	1.9	1.6	1.2	1.4	1.3
Hypertension	1.2	1.9	1.7	1.1	1.4	1.4
Diabetes with hypertension	2.5	3.7	2.9	2.3	2.9	2.5

Other non-communicable diseases

Prevalence of a wide range of non-communicable diseases including bronchial asthma, hereditary anaemia, and cancers is increasing among the refugee population. However, it was not yet possible to allocate part of the limited resources of the health programme to ascertain the burden of these diseases in terms of morbidity, disability, and mortality or to introduce appropriate interventions to adequately address them.

Assistance is provided to patients as they come to the attention of the health care system, which comprises medical supplies and hospitalization on need-basis.

A screening programme on Postural Deformity was conducted in 2008 by UNRWA physiotherapists in the West Bank, targeting all first class elementary students in West Bank UNRWA schools. 5624 students were examined. The study assessed:

- Weight, height and body mass index;

- Foot prints;
- Posture (standing and walking); and
- the postural status for every child.

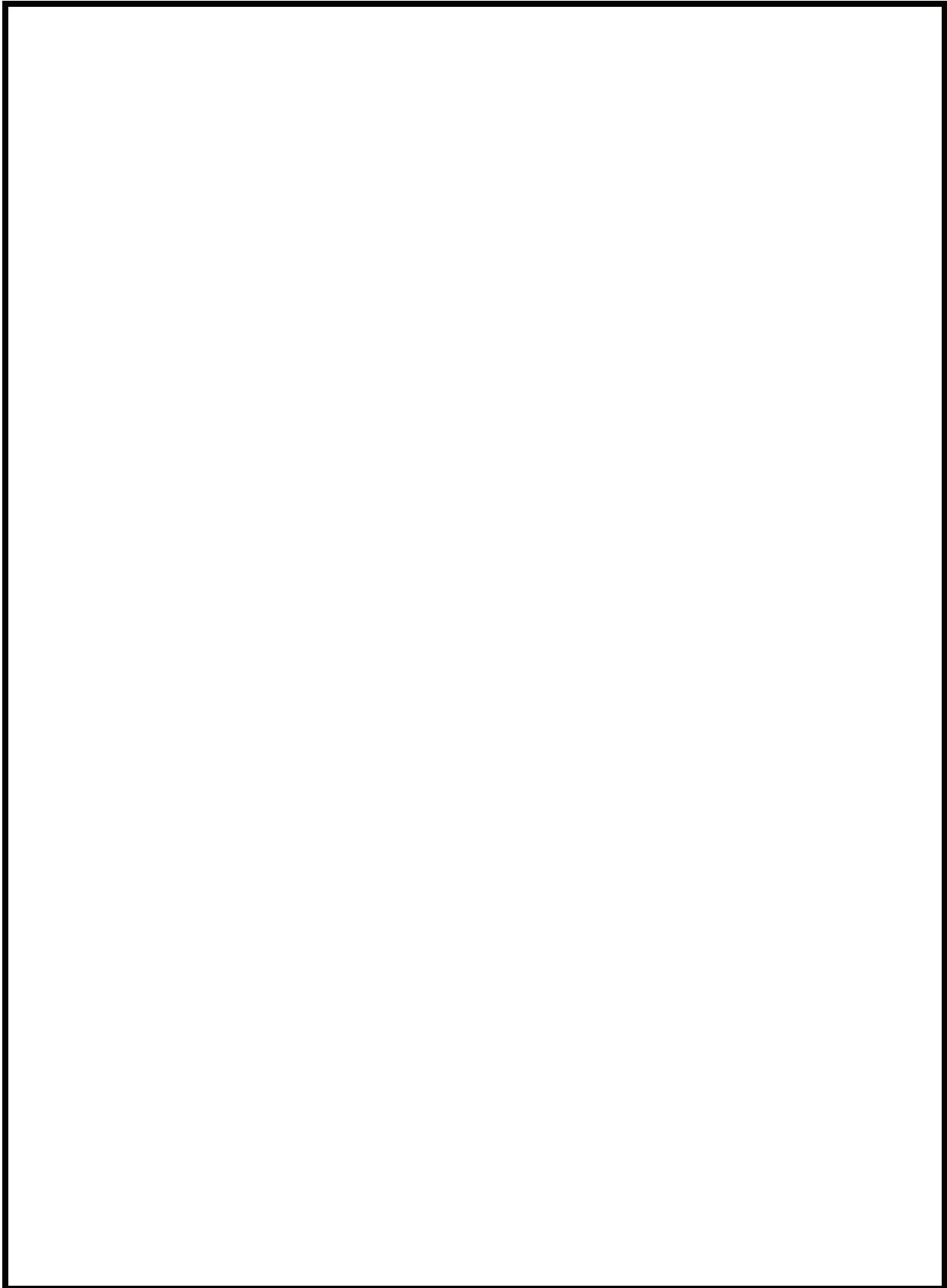
Children suspected to have postural problems were referred to UNRWA Physiotherapy Units and suitably advised. An electronic database was established using commercial software. The study revealed that 2,340 out of 5,624 students (41.6%) were affected by postural deformities distributed as shown in Table 16. As a student may have more than one postural deformity, the percentages do not sum to 100%.

References

1. C.J.L. Murray, B. Shengelia, N. Gupta, S. Moussavi, A. Tandon, M. Thieren *Validity of reported vaccination coverage in 45 countries* Lancet 2003; 362: 1022–27.

Table 11 - Distribution of cases according to affected area

Area	Percentage
Head	6.3%
Spine	11.1%
Shoulder Girdle	3.6%
Pelvis	0.8%
Hip	7.0%
Knee	2.4%
Ankle Joint	4.9%
Feet	28.6%



Environmental Health

Communicating about environmental health facilities, understanding of the complex links between economic and social development, environment and ecosystem; enable key indicators to be defined for assessing progress towards sustainable development.

WHO/Medium-term strategic plan, 2008-2013

Programme Goal

To reduce morbidity and risk of outbreaks associated with poor environmental conditions and practices, by maintaining acceptable environmental health standards in refugee camps and contributing to sustainable development in the areas of water, sewerage, and solid waste management and vector control.

Programme profile

UNRWA's Environmental Health Programme continued to focus on maintaining acceptable standards of water and sanitation in refugee camps and implementing vector control in the five Fields of operations. These services were provided to approximately 1.3 million Palestine refugees residing in 58 official camps. The services were provided either directly by UNRWA, or in close collaboration with local municipalities or through contractual arrangements.

In Jordan and Syria, the Host Authorities have historically played a major role in camp development and integrated camp infrastructure of water, sewerage, and drainage within municipal systems, except in a few situations where camps are located in areas where no such systems exist. Unlike Jordan and Syria, the environmental conditions in Lebanon, Gaza and the West Bank are generally poor and UNRWA had to assume a major role in camp development.

UNRWA's approach to camp development was developed in the late eighties where several development projects were implemented in Gaza and the West Bank in the context of the Expanded Programme of Assistance to the Opts. This approach was further enhanced through the establishment of the Special Environmental Health Programme in Gaza in 1993, which played a key role in carrying out camp-by-camp needs assessments, preparation of detailed feasibility studies, identification of projects, preparation of technical designs for construction of sewerage and drainage systems, and rehabilitation of water networks in refugee camps and nearby municipal areas. The Programme has also assisted in the review of feasibility studies and technical designs for development projects in the refugee camps in Lebanon, Syria, and the West Bank.

Progress in 2008

In 2008, the Environmental Health Programme maintained the required standards of sanitation and general environmental health in the Palestine refugee camps Agency-wide. This was achieved even during difficult circumstances such as the closures of Gaza strip and war by the end of 2008. The solid waste management in Gaza had many obstacles and problems as a result of the siege imposed on Gaza during the previous two years. Many spare parts & lubricants and equipment (refuse containers, vehicles, generators, truck loaders and pumps for landfill), for solid waste management were not available. Therefore, many vehicles were completely stopped and parked for long time without operation. Many efforts were made by many municipalities to operate their vehicles double or triple shifts which added another burden on their old vehicles.

Many municipal vehicles had to be replaced with new ones based on the expiry of their life span; however, due to lack of financial resources and siege, they are working with low efficiency.

Camp populations with access to water and sewerage facilities

In West Bank, the Agency is managing water lines supplying UNRWA installations, providing technical assistance; doing some routine and urgent maintenance and rehabilitation when needed in camps to prevent water contamination and health risks to occur. The environmental health is also responsible for the operation and maintenance of two UNRWA water facilities: The slow-sand filtration water treatment plant at Aqbat Jaber; and the water pump station at Far' a. Management of water supply to households including distribution and billing is the responsibility of the water utilities and water committees inside camps. An agreement between the Agency and the Ministry of Health stating that water samples from the camps are tested in the Central Public Laboratory in Ram Allah was arranged. There was no outbreak of water borne diseases in any camp during the year. Only six samples have failed the microbiological tests out of at least 819 water samples.

In Syria, regular bacteriological and chemical analysis were performed on the drinking water inside the camps and on all UNRWA installations, with regular checks for residential chlorine to control the quality of the tap water.

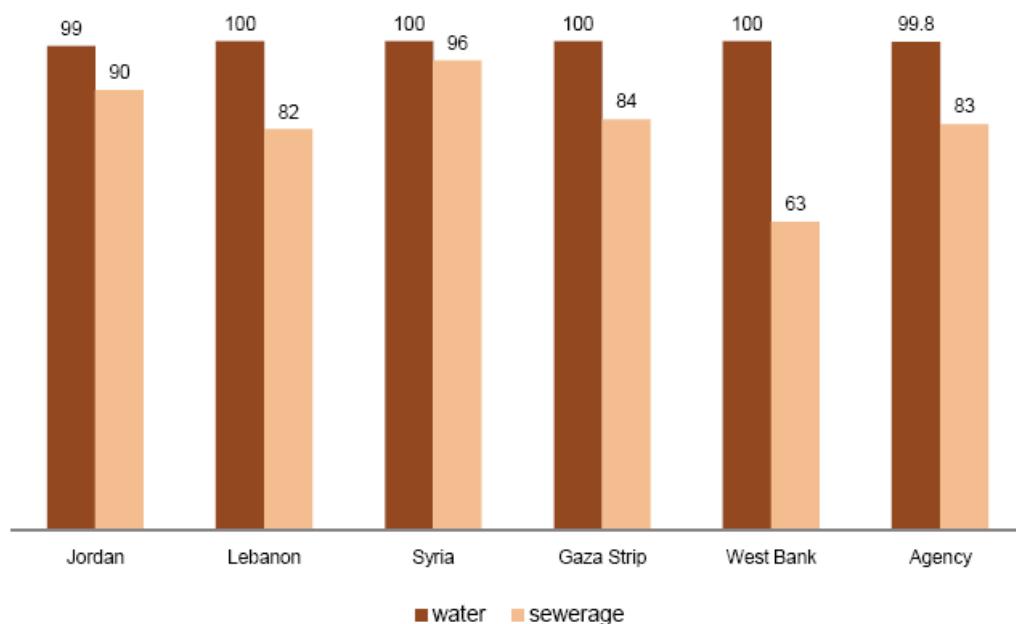


Figure 1 - Percentage of camp shelters with access to safe water and indoor sewerage systems connection

In Jordan, the ten camps have municipal water network which has been rehabilitated by the Government over the past 10 years. However, the water network at Jarash camp is still old and in a real need of rehabilitation. The Government water project to rehabilitate the water network at Talbieh camp was completed.

Laboratory tests were carried out for the total of 1338 water samples (111 samples/month) collected from the water supply network serving the ten camps to monitor quality of water. 99 % was bacteria-free in 2008. The remaining 1% became bacteria-free on re-testing. The free residual chlorine was measured daily.

In Lebanon, More than 400 water samples collected from camps and UNRWA installations were tested bacteriologically, almost all gave satisfactory results. Investigations and corrective measures were taken in case of unsatisfactory results. More than 4,000 water samples were tested for residual chlorine in water distribution networks in all camps. Almost all gave satisfactory results. Sufficient quantities of gas oil and sodium hypochlorite were distributed to all camps for operating water plants and disinfecting water supplies in camps. Minor rehabilitation works to water distribution

network were carried out in B/Barajneh Camp. The water table for the water well in Wavel Camp was continuously depleting and causing water shortage; an emergency arrangement was adopted by supplying the camp temporarily from Baalbeck water authority sources to compensate shortage of water.

The multipurpose sewer tanker was effectively utilized for sewer clearing in almost all camps. As usual every year, Environmental Health Division took the required arrangements for implementing flood prevention measures in all camps in anticipation of the rainy season.

Development projects

The Gaza Strip

The total investment in development projects since the establishment of the Special Environmental Health Programme in 1993 is outlined in Figure 2, some of planned projects for 2008 were not implemented due to lack of funding and the war on Gaza and continued closures of borders.

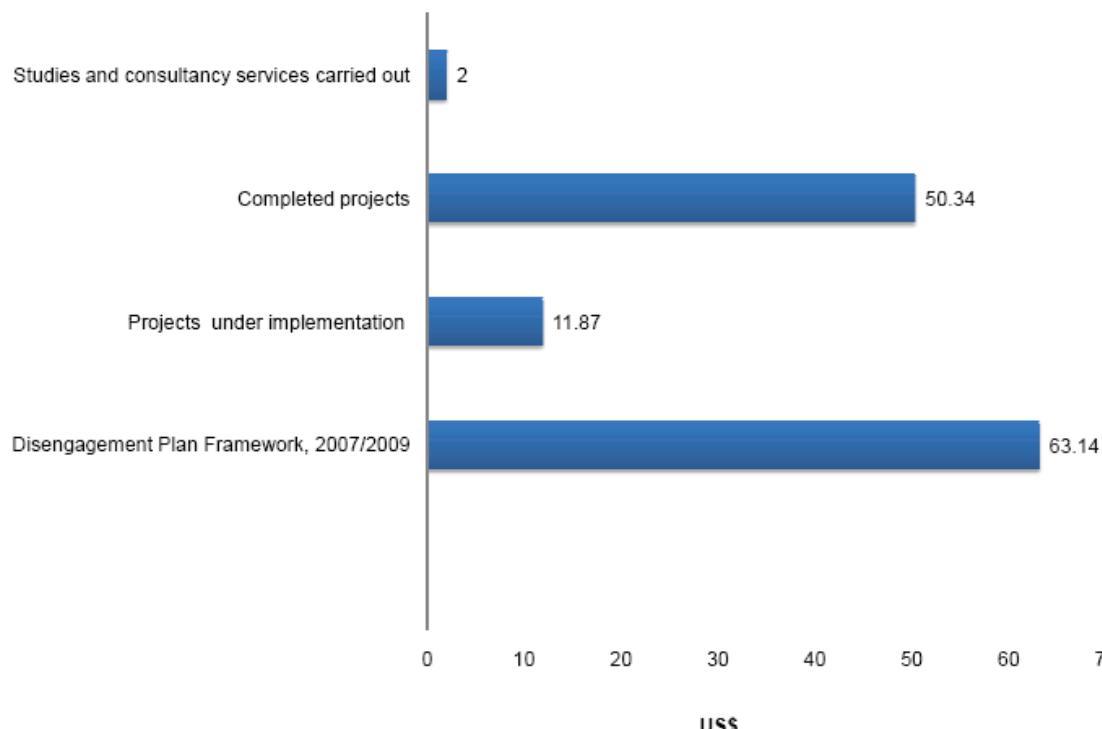


Figure 2 - Special Environmental Health Programme (Gaza Strip) - Cost of Projects, Studies and Consultancy Services (million US\$)

The West Bank

Two funds were available for projects for the year 2008, one from USA and the other from Spain. Most physical works for the Emergency Infrastructure projects were completed by December 2008, while the rest are expected to be completed by January 2009. All these infrastructure projects are of rehabilitation type for water networks, sewer pipes, manholes and storm water channels. They are expected to improve public health and enhance infrastructure

Jordan

Jointly with the Department of Palestinian Affairs (DPA) an improvement project in the amount of 52,600 USD for construction/maintenance of concrete drains and pathways in Jarash camp was completed in June 2008.

Lebanon

A series of environmental health projects were implemented or under implementation in Lebanon Field, these covered the following activities:

Early Recovery Projects (ERP):

1. Mechanization of refuse collection and disposal:

- This project aimed at improving collection and disposal of camps' refuse through procurement of refuse bins and dumpers that would enhance mechanization of the solid waste management process;
- 560 polyethylene refuse bins of different sizes were procured and distributed to all camps in Lebanon; and
- 320 polyethylene refuse baskets were procured and distributed to all camps.

2. Generators Project :

This project covered the procurement and installation of four electric generators to run the water plants in camps, namely two in Ein el-Hilweh Camp and one for each of Rashidieh and Burj El-Shemali. The four generators were procured and installed in the camps as planned. Both generators assigned for Ein el- Hilweh Camp were

handed to local committees in charge of running the water wells. The remaining two generators were installed by UNRWA in Burj el-Shemali and Rashidieh Camps.

El-Buss Camp infrastructure project:

The construction of water supply, sewerage and storm water drainage in El-Buss Camp funded by the US Government initiated in 2006. Works have been completed. It is worth noting that the full utilization of the newly constructed water supply network will depend on the commencement of water supply in the new municipal system to which the camp new distribution network was connected.

Shatila Camp infrastructure project:

This project funded by the US Government aims at construction of complete new water supply, storm water drainage and wastewater drainage systems in the camp. The development of detailed designs and implementation of works, being under the control of Engineering Department are subject to delays mainly due to resistance of some of the camp inhabitants to developing local wells. Intensive contacts were made with the stakeholders mainly municipal and water authorities to overcome the current obstacles.

New water well in Wavel Camp:

Works in developing new water well in Wavel camp are progressing and expected to be finalized by end of January 2009. This well will solve the problem of the water shortage suffered in the camp due to depletion of the water table in the existing water wells.

Syria

About 400 meter pipeline of water and wastewater were replaced/constructed in the year 2008 by community where the agency presented the required materials.

Vector Control

In 2008, UNRWA regularly carried out vector control activities in the camps. The vector control campaign in the West Bank started in all nineteen camps at the same time from May to September 2008. The campaign included training of staff on the modern approaches in



the control of disease causing vectors and the provision of tools, equipment, protective clothing, and chemicals. The routine application of insecticides through the general fund has continued, however the mentioned campaign concentrated more on rodent control. The training and follow up of results was conducted in cooperation with Environmental Health Department in the Ministry of Health.

In Jordan Field, Insect control was regularly carried out at refuse collection points within the camps. In addition, cockroaches, bedbugs and fleas were treated. Rodent control was also regularly carried out, in shelters, in addition to the camps' surroundings.

Regular and individual spraying campaigns were conducted in all official camps in Syria Field.

In Lebanon, as complementary to the environmental measures, campaigns for insect and rodent control were carried out in all camps and intensified during the hot season using fogging machines and sprayers in addition to distribution of rodent baits in all camps. Sufficient amounts of insecticides and rodent baits were made available in all camps. Fogging machines were allocated to all Areas to cover needs in camps for insect control.

Solid waste management

Solid waste management is one of the main activities undertaken by the Environmental Health Programme, and it is the most resource consuming component in terms of finances and staff. The solid waste programme aims to enhance the mechanization process for

collection and disposal of wastes through the procurement of equipment that offsets the increase in solid waste due to population growth. The following is a summary of what has been achieved in 2008 in the various fields.

In Lebanon the generated domestic wastes in the camps are collected by sanitation labourers six days a week. The collection of garbage is made manually from door to door using hand carts and emptying these into transit refuse platforms. In an effort to achieve more mechanization of refuse collection and disposal, the Environmental Health Division has procured 17 new dumpers for refuse collection in the 12 camps.

Solid wastes were collected and disposed of normally from all camps including N/Bared Camp adjacent areas.

Negotiations between UNRWA, Tyre municipality and the landlord of Tyre private refuse dumping site have been concluded with extension of the current arrangement for dumping Tyre camps refuse during 2008. This arrangement is being adopted by UNRWA due to absence of an alternative municipal dumping site and since the municipal refuse treatment plant is not in operation yet. New steel refuse bins of 1,100 liters capacity and containers (110, 220, and 330 liters capacity), were distributed to all camps under Emergency and Early Recovery Programme (ERP) funds. Steel refuse bins in various camps were subject to maintenance and replacement of damaged wheels. Medical wastes from UNRWA health centers in camps are collected using safety boxes and these are disposed of into UNRWA refuse bins.

In some private hospitals, medical wastes are collected in bottles or plastic barrels, and then disposed off into public refuse bins, sometimes medical wastes are burned in small holes excavated near the hospitals.

In the West Bank, ten trucks are available for the field (3 in Nablus area, 4 in Jerusalem area -3 working and 1 standby- and 3 in Hebron area). In 2008, almost 75,405 tons of domestic, medical and commercial waste has been removed and disposed in the municipal dump sites. Medical waste generated from UNRWA clinics is not managed properly according to the minimum health and environmental guidelines. In the clinics separate bags are used for the collection of medical waste; however the bags are sent to the ordinary refuse containers in the camps. The process is posing public health risks especially to sanitation labourers in the camp and scavengers at the dump site. An initial study on the solid waste management in 2008/2009 shows that significant increase in the cost to the Agency will occur as a result of the changes with the service providers. The changes are positive from an environmental and health point of view as more sanitary dump sites will be introduced.

In Jordan Collection of solid waste from shelters, markets, roads and alleys was carried out by sanitation labourers with their manual transport to designated collection sites/containers within the camps. A small compactor was used to help the labourers in Baqa'a camp in the collection.

Removal of solid waste from the point of collection to the point of final disposal at municipal dumping sites was carried out by private contractors for two camps, namely Baqa'a and Marka camps, by municipalities from Zarqa, J/Hussein and Amman New Camps and by UNRWA from Irbid, Husn, Suf, Jarash and Talbieh camps.

With the support of the Syria Health program and PLO Syria, 33 garbage containers were purchased to assist in waste collection in the Syria Field. This is a major advantage as previously two old compactors were serving five camps, without an alternative if the compactors were out of service.

Overall, 2008 saw a number of achievements in the waste management area for the Environmental Health Programme, and these achievements go towards

fulfilling the greater objectives outlined in UNRWA's Medium Term Plan (2005-2009), in particular achieving cost-efficiency gains by reducing the labour-intensive costs of sanitation and improving the general cleanliness of all camps.

Other Environmental Health activities in 2008

In West Bank the Environmental Health Divisions launched awareness workshops and trainings on environmental health issues, aiming at raising public awareness in camps and improving understanding of environmental issues such as proper handling of domestic and medical wastes, rationalization of water consumption. Eleven environmental health staff participated in two workshops organized by the Ministry of Health. One on the Medical Waste management and the other was on general environmental health inspection and surveillance. Training in the inspection of commercial premises and institutions (Inspect on meat and poultry shops and markets) was held for the three Area sanitation officers and the eighteen sanitation foremen in the West Bank. A workshop on food safety was held in Jericho for area sanitation officers, Field and Area Project coordinators, and sanitation foremen.

In Jordan two in-service training seminars one-day each were conducted in June and November 2008 for sanitation for men (24 participants) on the subject of sanitation work management. The seminars were facilitated by Field and Area environmental health staff.

In-service training activities were conducted in Lebanon Field to sanitation supervisors and Water Plant Operators during field visits to camps. A total of 30 environmental health staff were trained on quantitative control on the operation of water plants.

Overall, the Environmental Health Programme has maintained environmental health standards across the five Fields in 2008 with a 100 percent success rate in relation to safe water in Lebanon, Syria, Gaza and the West Bank. A summary of environmental health services by figures is illustrated in Table 1.

Table 1 - Environmental Health Services data for 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Water supply						
Percentage of shelters with access to safe water	99	100	100	100	100	99.8
Sewerage and drainage						
No. of camps partially or fully connected to sewerage networks	8	9	8	7	17	49
Percentage of shelters connected to sewerage networks	90	82	96	84	63	83
Solid waste management						
No. of camps partially or fully served by UNRWA mechanized systems	5	12	6	8	16	47
No. of camps served by Municipalities	3	5	3	0	13	24
No. of camps served through contractual arrangements	2	0	0	0	2	4

In relation to these services, it is not uncommon for camp populations to be served by more than one source/system. All camp shelters Agency-wide are served by private latrines connected to local cesspits or proper sewerage schemes.



Delivering Health to the Victims of Conflict

The international community must assume its responsibilities to facilitate progress – and, where necessary, insist on it...in the aftermath of the tragic conflict in Gaza, this is more urgent than ever.

Secretary-General Ban Ki-moon, January 2009

Chronic emergency in the oPt and Gaza Crisis

The year 2008 not only saw UNRWA struggling with the effects of socio-economic hardship brought upon refugees by the chronically unstable situation in the Near East, but ended tragically with a conflict in the Gaza Strip that claimed almost 1400 lives. Although the conflict ended in 2009 (27 December-18 January 2009), it was deemed necessary to include the details of the conflict and the UNRWA response in this annual report 2008, issued in May 2009.

Socio economic conditions in the oPt and the closure regime

The occupied Palestinian territory (oPt) is suffering the long-term effects of socio-economic hardship with a progressive isolation of Gaza and a growing lack of geographic contiguity in the West Bank.

Restrictions on the movement of Palestinian people and goods in and out of Gaza and within the West Bank are affecting not only access to basic services such as health, but also limiting commercial activities [1] and contributing to worsening socio-economic conditions.

As of 2008 the oPt was having difficulty facing the long term effects of socio-economic hardship and the current crisis the Gaza Strip is only aggravating its isolation and infrastructural decline. The combination of expanding settlements and outposts, limitations to movement of people and goods due to the Barrier and a complex system of physical obstacles and checkpoints is progressively narrowing the possibilities that Palestinian residents of the West Bank have of accessing all services, including health care. As of 2007, more than 38 percent of the West Bank consisted of settlements, outposts, military bases and closed military areas. Nearly three quarters of the projected Barrier route runs inside the West Bank and will isolate, once completed, approximately 10.2 percent of West Bank territory, including East Jerusalem that will be physically connected to Israel. There is a comprehensive system of 85 manned checkpoints and more than 460 physical obstacles regulating or preventing Palestinian vehicles from using roads primarily reserved for Israeli use. This implies long detours and waiting time and is leading to the formation of Palestinian enclaves within the West Bank. These are geographically separated one from the other by some form of Israeli infrastructure (settlements, outposts, military areas, nature reserves and the barrier) where the road system functions as an adjustable corridor effectively limiting Palestinian movement [2].



The socio-economic situation in the oPt is deteriorating rapidly. A sharp economic regression had already been documented in 2006, with a per capita GDP drop of 30 percent compared with 1999 in the oPts. The situation is particularly severe in the Gaza Strip where nearly 80 percent of the population was already living in conditions of extreme poverty by that time [3] and the trend is pejorative. Consumption poverty rates* per household have increased from 26 percent to 49 percent between 1998 and 2008 [4], unemployment rates have reached 49 percent [5] and more than half the population in the Gaza Strip was found to be food insecure** [6].

Challenges in providing health care in a closure regime

The Gaza Strip

Both UNRWA and the World Health Organization (WHO) have repeatedly expressed concern about the consequences that the strict closure policy imposed on

Gaza will have on the health of the population residing there and on their right to enjoy the highest attainable standard of health. The conditions are extremely volatile and impositions of complete closure, as happened in January 2008, resulted in severe consequences for the resident population. On that occasion the power plant, the pumps at water wells and the wastewater management plants stopped functioning due to fuel shortage. Many houses in Gaza remained without water and there was an increased risk of wastewater floods. The interruption of energy provision jeopardized primary health care services, medical supply delivery and, at secondary health care level, had a particularly severe impact on intensive care units, operation theatres and emergency rooms [7].

Tertiary health care services are available only outside Gaza. The frequent closure of borders has made seeking high-level specialized health care increasingly difficult for Gazan patients. De facto the referral system can no longer be guaranteed for Palestine refugees.

* Consumption based measures of poverty are based on expenditure data rather than income. They are usually considered a more comprehensive system to assess poverty as they reflect income as well as past savings, access to credit markets, and seasonal variation in income. ** Food insecurity was defined as households with income and consumption below USD1.9/cap/day or showing decrease in total, food and non-food expenditures, including households unable to further decrease their expenditure patterns.

The West Bank

Access restrictions are a major challenge to providing continuative health services to Palestine refugees in the West Bank as they involve patients and UNRWA staff members alike. Over the years, contravening the 1946 Convention on the Privileges and Immunities of the United Nations and the 1967 Comay-Michelmore Agreement, UNRWA health staff members have been denied or delayed access to their work place and there have been increasing demands for searches of UN vehicle. This is complicating operational procedures and ultimately impairing the Agency's service delivery also by reducing its outreach capacity. It has determined the loss of hundreds of person-days each year and is having relevant economic repercussions [8].

Although the factors contributing to the observed differences in the health status of Palestine refugees in the Gaza Strip and the West Bank described in chapter one are probably diverse, it is relevant to note that West Bank residents have some level of access to Israeli high quality health services that is only exceptionally available to Gazans. Moreover shortage of medical

supplies and of other essential goods such as fuel and electricity are much more frequent in the Gaza Strip and have led to dysfunctions in the provision of healthcare [9].

The response of UNRWA's Health Programme

The UNRWA Health Programme faced substantial demand for its services in terms of increased primary health care consultations, laboratory, dental and family health services, consumption of medical supplies, and admission of patients to hospitals. Patients, staff members, and the delivery of medical supplies were all severely affected by the access restrictions. However UNRWA, despite the situation, managed to continue to operate effectively by investing in personnel and outreach services (mobile clinics).

The emergency expenditure for the oPts for 2008 was US\$ 8.8 million, 28.7% for the West Bank and 71.3% for the Gaza Strip as shown in Table 1. This represents a decrease for the West Bank compared with 2007 when total emergency expenditure was US\$ 3 871 323.

Table 1 - Emergency expenditure in 2008, oPt

Field	West Bank (US\$)	Gaza Strip (US\$)
Staff costs at Health Clinics & Mobile Clinics	1 131 450	1 201 708
Medical supplies for Health Clinics & Mobile Clinics	451 285	1 353 418
Electricity, Rent, Water, Telephones & Travel, Uniforms	37 686	
Equipment for Health Clinics	274 515	3 716 515
Qalqilia Hospital Specialists	25 931	
Hospitalization	521 696	
Reimbursement of Drugs - Individual Subsidies	70 813	
Running Cost of Mobile Vehicles & Supplies	9623	
Total	2 522 999	6 271 641

Table 2 - Emergency health staff in 2008 (including Mobile Teams)

Field	West Bank	Gaza Strip
Doctors (Medical Officers & Specialists including Area and Field Staff) & Qalqilia Hospital	22	76
Pharmacists	0	68
Dental Surgeons (including SDS)	11	16
Nurses (including Area and Field Staff)	58	92
Other health staff	57	89
Admin/Support Staff	32	122
Labour category	10	62
Total	190	525



Emergency employment

Various categories of emergency programme support staff (EPSS) were hired with emergency funding to meet the increased demand on the medical care services or to replace staff who were unable to reach their duty stations due to restrictions on movement. Table 2 shows all staff hired during 2008 in West Bank and the Gaza Strip, including staff working with the mobile clinics.

Gaza Strip hired roughly one and a half times the amount of staff hired under the emergency programme compared with the West Bank until September 2008 (299 staff) subsequently it increased to almost three times. The emergency staff hired in the West Bank decreased from 251 in 2007 to 190 in 2008.

Outreach services (Mobile Health Teams)

UNRWA Mobile Health teams, comprising a medical officer, practical nurse, laboratory technician, assistant pharmacist and a driver have operated in the West Bank since February 2003. No mobile teams are deployed by the Programme in the Gaza strip. The main objective of

these teams is to meet the additional burden on the health system and to facilitate access to health services in locations affected by closures, checkpoints, and the Separation Wall. The teams offer a full range of essential medical services including immunisation, control of communicable and non-communicable diseases, and first-aid treatment for conflict-related injuries, all of which is provided in spaces made available by communities or even in the street if necessary. Visits to the villages are arranged at area level and announced through the mosques, community-based centres, and via word-of-mouth. Since becoming operational, the mobile clinics have played a critical medical role. They have treated an increasing number of Palestine refugees from 69 500 in 2003 to 139 992 in 2008 although the number of visits to villages has decreased quite sharply. This is related to the fact that some mobile clinics have become semi-permanent, and have converted to providing constant services although still managed by “mobile teams”. This has also determined an increase in the number of patients in these localities, as beneficiaries have been attracted from neighbouring areas by the prospect of constant delivery of health care.

Table 3 - Mobile Teams number of consultations and number of visits 2004-2008

West Bank Mobile Clinics	2004	2005	2006	2007	2008
Total No. of consultations	110 490	136 275	134 180	133 122	139 992
Total No. of location visits	1230	1434	1447	1447	1159



Emergency in the Gaza Strip

During the military operation named Operation Cast Lead, launched by the Israeli Defence Force (IDF) in response to the launch of rockets from the Gaza Strip, between 27 December – 18 January, almost 1400 people were killed. Among those, 431 were children and 112 women. At least 5,380 people were injured, including 1,872 children and 800 women. Injuries were often multiple traumas with head injuries, thorax and abdominal wounds [10].

According to the initial assessment of the situation conducted by WHO, “*vital infrastructure was compromised or destroyed, resulting in a lack of shelter and energy sources, deterioration of water and sanitation services, food insecurity and overcrowding. An estimated 100,000 people were newly displaced. Fifteen hospitals and 41 primary health care (PHC) clinics in the Strip were damaged during the strike and 29 ambulances were damaged or destroyed. 21 out of 56 Ministry of Health (MoH) and three out of 17 UNRWA PHC centres were closed during part or all of the period of the crisis. Access to health care was severely restricted and hampered by security constraints*” [11].

52 UNRWA installations in Gaza were damaged by IDF fire, including seven health centres and the UNRWA

Field Office. As the result of severe shelling on the 15th of January the warehouses and all stores were destroyed. Preliminary estimates indicated that the cost of repairs to damaged Agency installations exceed US\$ 3 million, not including the cost supply replacement, of which a relevant proportion were drugs, that was estimated to require additional US\$3.6 million.

During the conflict UNRWA provided temporary shelter to over 50 000 Palestinians who sought refuge in over 50 of the Agency’s schools. Although the security constraints severely limited movement of staff, with only around 1000 of the Agency’s 10 000 Palestinian staff in Gaza Strip working throughout the crisis, UNRWA managed to continue health service delivery and to adjust to the health needs of displaced people and to the deterioration of environmental health standards.

Following Israel’s unilateral ceasefire declaration on the 18th of January 2009, UNRWA expanded emergency operations to meet additional humanitarian needs arising from the crisis and support the longer term recovery and rehabilitation process. The UNRWA Health Programme post-conflict and recovery strategy defined the priority interventions to be carried out in the period comprising the first three months after the end of hostilities. The general objective was to mitigate the effects of conflict of Palestine Refugees in the Gaza Strip in terms of morbidity and mortality through a set of appropriate health initiatives.

Three strategic health objectives were identified:

- To guarantee the continuity of UNRWA comprehensive primary health care services in the Gaza Strip;
- To expand services in response to increased/new needs of beneficiaries; and
- To coordinate externally and internally the intervention and set up Partnerships with other stakeholders.

Critical health services had never stopped functioning and by the 20th of January all UNRWA's health centres in Gaza had resumed operations. The reactivation of treatment of chronic diseases, also through active case finding and catch up immunization campaigns were organized in the immediate aftermath of hostilities.

The mitigation of the effects of the conflict is estimated to require years of physical and psychological rehabilitation. Cases of post-traumatic stress disorder (PTSD) and other psychological and behavioural disorders triggered by exposure to traumatic events are expected to rise, as are the refugees requiring physical rehabilitation. Patients who badly need physiotherapy services are expected to increase in 2009, as it is estimated that approximately half of the 5,380 injured during the war on Gaza will suffer life long impairment and will require physical rehabilitation to prevent complications and permanent disability. Moreover, physiotherapy services are expected to provide the injured with orthopaedic devices and rehabilitation as needed.

UNRWA has planned for the expansion and diversification of physiotherapy/rehabilitation and mental health both building on the already existing UNRWA services in the Gaza Strip and securing partnerships with other stakeholders. The programme has prioritized children and adolescents attending UNRWA schools in the Gaza Strip for PTSD screening activities.

The combination of worsening environmental health conditions, overcrowding, loss of shelters and overburdened and overcrowded health facilities led to an increased risk of outbreaks. In order to monitor more closely communicable diseases in the Gaza Strip, UNRWA, in collaboration with WHO, established an early warning system (EWAR) based on the existing epidemiological surveillance system in place. As the detainee of historical epidemiological data for Palestine refugees, that constitute the majority of the population in the Gaza Strip, UNRWA started issuing every week the UNRWA Epidemiological Bulletin for the Gaza strip to WHO and all the members of the Health Cluster for the Gaza Crisis. At the date of the compilation of this report, the UNRWA Bulletin was still the only source of epidemiological information on outbreak prone communicable disease available in the Gaza Strip and was regularly quoted by WHO.

The most recent conflict, with its burden of human suffering and loss of human lives, has only worsened the chronic difficulty of assisting people in the Gaza Strip and is not the main challenge UNRWA and other health care providers in the Gaza Strip face today. Improving the impact on the health of Palestine Refugees in the Gaza strip will require more than the mitigation of the effects of the latest war.



The 2007 Annual Report described the activities carried out by the Health Programme finalizes at buffering the adverse effects of conflict on the health of Palestine refugees from Nahr El-Bared Camp (NBC), in Lebanon, and who fled Iraq, in Syria. However UNRWA continued to assist these populations throughout 2008. In this chapter we report on UNRWA's health programme activities for these particularly vulnerable refugee groups.

Post emergency in Lebanon

27000 Palestine refugees were estimated to have been displaced from Nahr el-Bared camp and its adjacent areas in northern Lebanon in mid-2007 due to the armed conflict between the Lebanese Armed Forces (LAF) and the extremist Fatah Al-Islam group. Infrastructure damage in the camp was devastating, 95% of all buildings and infrastructure were estimated to either have been destroyed or damaged beyond repair. Reconstruction is taking place and is due to be completed by mid-2011.

Relief efforts carried out from mid 2007 throughout 2008 have mitigated some of the worst impacts of the crisis on affected families, ensuring access to health, shelter, food, water and sanitation and other basic services. A recent UN World Food Programme (WFP) food security assessment concluded that levels of nutrition amongst displaced families were 'good' and there have been no recorded outbreaks of communicable diseases since the start of the crisis [12].

According to the Agency's 2008 assessment however, "living conditions for the vast majority of refugee families displaced from NBC and adjacent areas remain poor. Families fled without any belongings and have few assets at their disposal; most breadwinners remain out of work and already limited coping strategies are often exhausted, leaving households extremely vulnerable. Many of the displaced are living in cramped,



Nahr el-Bared camp in 2008

overcrowded quarters with little privacy; some remain in unacceptable conditions in garages and commercial units. Moreover, due to the extent of the damage caused during the conflict, only a small minority – 713 families – have so far been able to return to their homes, all in the adjacent areas" [13].

The response of UNRWA's Health Programme

The aim of the health Programme for 2008 was to maintain access to basic health services, hospital care and life-saving medication for families affected by the crisis in NBC, including returnees to the adjacent areas.

In 2007, UNRWA established a temporary clinic in the Adjacent Area serving around 100 patients a day. This was replaced in February 2008 by a semi-permanent clinic now operating from 7:30 am to 2:00 pm, assisting approximately 160 patients a day. Contextually in the areas adjacent NBC, outreach mobile clinics were suspended.

To adjust for increased needs of Refugees, the UNRWA health clinic within Nahr el-Bared camp protracted its working hours and has been working seven days a week since the beginning of the crisis. A redistribution of beneficiaries has also affected the catchment population of neighbouring health centres, such as the one in

Tripoli now assisting 350 additional displaced families.

In addition to the increased direct provision of comprehensive primary health care services, UNRWA has been providing full hospitalization costs, unlike elsewhere in Lebanon where a partial reimbursement scheme is in place. Additional contracts for hospitalization services were made specifically to provide refugees with radiology and laboratory services and access to specialist consultations. A contract was also established with Beddawi pharmacy in order to ensure that displaced families are able to secure life-saving drugs not available in UNRWA dispensaries [14].

The emergency expenditure for Lebanon in 2008 amounted to almost US\$ 2 million , and as shown in table five, 15 people were hired in 2008 as EPSS with emergency funding.



Nahr el-Bared camp in 2008

Table 4 - Emergency expenditure (US\$) in 2008, Lebanon

Staff costs at Health Clinics & Emergency Clinics *	58 861
Medical supplies for Health Clinics & Mobile Clinics	109 658
Remodelling of Mobile Clinics & Rent	
Equipment for Health Clinics	346 491
Hospitalization including Open Heart Surgeries	1 157 466
Reimbursement of Drugs - Individual Subsidies	255 443
Total	1 927 919

*This section reports on two Health Centres in Nahr el-Bared Camp (NBC) called NBC1 and NBC 2

Table 5 - Emergency Health staff in 2008 (including Mobile Teams), Lebanon

Doctors (Medical Officers and Field Staff)	3
Pharmacists - Assistant Pharmacist	1
Dental Surgeons (including SDS)	2
Nurses (including Area and Field Staff)	6
Other health staff	0
Admin/Support Staff	1
Labour category	2
Total	15

Palestine refugees from Iraq in Syria

The prolonged war in Iraq has resulted in millions of Iraqis fleeing their country. Among those who were seeking a safer environment, are Palestine refugees who have lived in Iraq for decades.

In Syria, the UNRWA Health Department started providing basic health care services to these refugees at the border in 2006 when there were only a few hundred. An UNRWA medical officer and nurse would visit them once a week to provide basic health care services. At the beginning of 2007, a decision was taken by the Syria Field to assist those Palestine Refugees who managed to enter Syria from Iraq and to grant them a special temporary registration cards which entitled them to full health care services (out-patient, non-communicable disease treatment, hospitalization services etc) in addition to education and relief and social services.

Assistance to this group of refugees continued in 2008.

This subpopulation of refugees is growing. Compared with 2007 40 more families are assisted, a total of 4007 (almost 25% more than in 2007). Most refugees reside in the Damascus Area, in the Yarmouk Camp, while smaller groups are found in the Dera'a and Homs Camps and surrounding areas as shown in Table 6.

Although UNHCR has been contributing financially to the provision of health care to this specific subgroup of refugees, their increasing number constitutes a challenge in the maintenance of the same level of health assistance. Table 7 shows the donation of the Australian Government for the assistance of Palestine Refugees from Iraq received at the end of 2008. This important donation will be spent for activities to be carried out in 2009.

Table 6 - Data on Palestine Refugees from Iraq residing in Syria, 2008

Clinic area	Number of families	No. of individuals
Damascus	780	3874
Dera'a	17	72
Others Areas	15	61
Total	812	4007

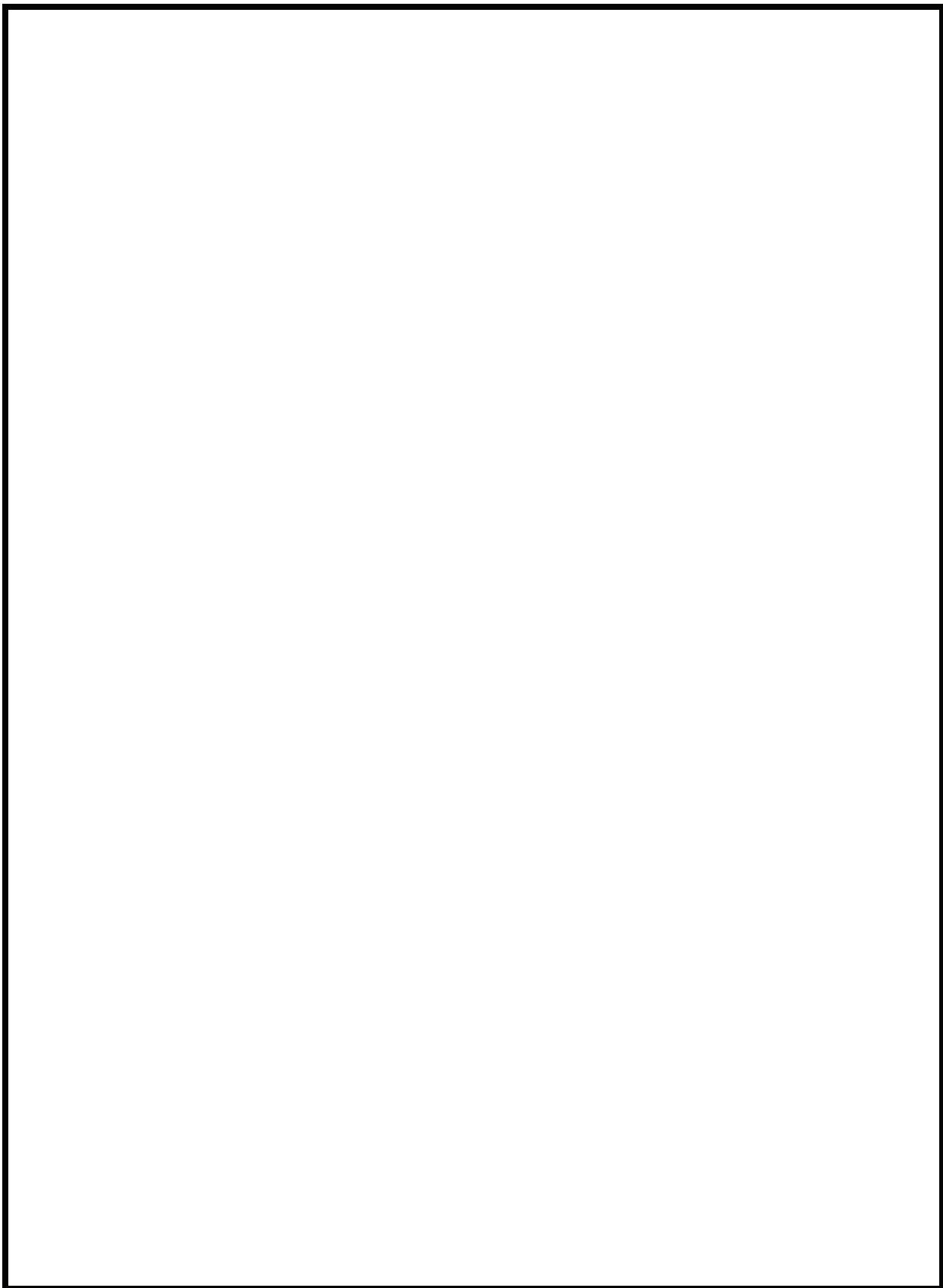
Table 7 - Donation of the Australian Government for the assistance of Palestine Refugees from Iraq

Invoice	US\$
Equipment (major)	35 000
Upgrading and maintenance of health centres	69 861
Minor equipment and furniture	9000
Hospitalization	112 800
Drugs	48 500
Prosthetic devises	15 019
Total	290 180

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Programme Management

More efforts are required to ensure that organizational policies and commitments to gender equality and health equity are communicated, understood and integrated at all levels ... in particular through learning and development activities.

WHO Medium-term strategy plan 2008-2013

Goal

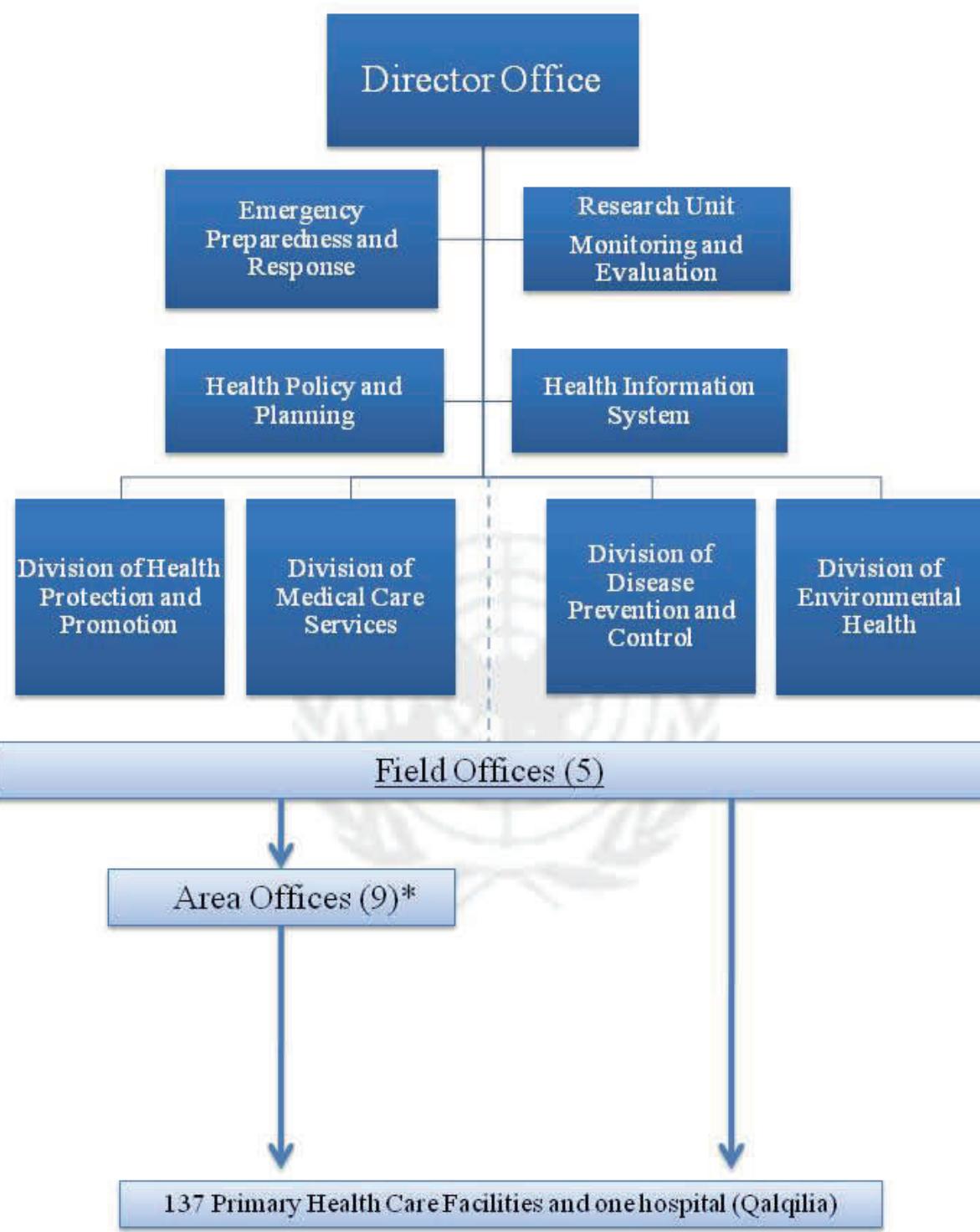
To oversee all aspects relevant to planning, direction, supervision and evaluation of UNRWA's Health Programme in accordance with the WHO strategic approach to health care and policies on best practice.

Organizational structure

The Department of Health at Headquarters in Amman, Jordan, comprises the Director of Health and his Deputy, who are seconded from the WHO to UNRWA on a non-reimbursable loan basis (the Deputy Director position was vacant throughout 2008). The Director of Health reports to the UNRWA Commissioner-General on administrative and policy matters and to the WHO/EMRO Regional Director on technical matters.

The Headquarters team also comprises two Division Chiefs, in charge of the Disease Prevention and Control and Health Protection and Promotion sub-programmes, a Health Policy & Planning Officer, a Senior Pharmacist, a Head laboratory and medical diagnostics, a Maternal and Child Health Officer and a Statistician. In 2008 a Media and Communication Officer and an Epidemiologist and Public Health Specialist were integrated in the team through a special agreement with the Australian and Italian governments respectively. These international human resources were made available free of charge.

In each of the five Fields of the Agency's area of operations, the Health Department is headed by a Chief, Field Health Programme, who reports directly to the Field Director on administrative issues and to the Director of Health on technical matters. The Chief, Field Health Programme is assisted by a Deputy Chief, a Field Disease Control Officer, a Field Family Health Officer, a Field Nursing Officer, a Field Sanitary Engineer, a Field Pharmacist, a Field Laboratory Services Officer and a Senior Dental Surgeon. In addition, the Chief of the Environmental Health Programme in Gaza Strip receives policy guidance from the Director of Health on the strategic orientation of the Programme.



* Areas are present in all UNRWA Fields except Gaza and Lebanon

Figure 1 - Functional chart of the UNRWA Health Programme in 2008

The Health Programme, as would be expected by the nature of its deliverables, has highly standardized technical procedures that reflect WHO standards, international evidence based criteria, approved UNRWA policies, and best practice guidelines in public health. Regularly updated technical instructions, guidelines, and management protocols are the tools through which the Agency operating procedures are shared across the Health Programme.

Implementation of the technical instructions, guidelines and management protocols is monitored through a systematic assessment of outcomes based on measurable indicators and fostered through regular visits to the Fields by Headquarters staff.

Changes to standing policies, development of plans of action and establishment of targets to achieve them are usually decided on at meetings between the Field Health Programme Chiefs and Headquarters senior staff, and at Divisional meetings between staff from the technical units in Headquarters and the Fields. During 2008 the following meetings were held:

- Chiefs & Deputy Chiefs, Field Health Programme meeting, 4-6 February 2008,;
- Field Family Health Officers meeting, 26-28 February 2008;
- Field Nursing Officers meeting, 16-18 March 2008,
- Field Laboratory Services Officers, 19-21 August 2008;
- Field Pharmacist meeting, 25-26 August 2008; and
- Chiefs & Deputy Chiefs, Field Health Programme Meeting, 5-7 November 2008.

The functions of the various sub-programmes of the Health Programme (Figure 1) are as follows:

Health Protection & Promotion: expanded maternal health and family planning, child health services, school health, nutritional surveillance and food safety, and mental health;

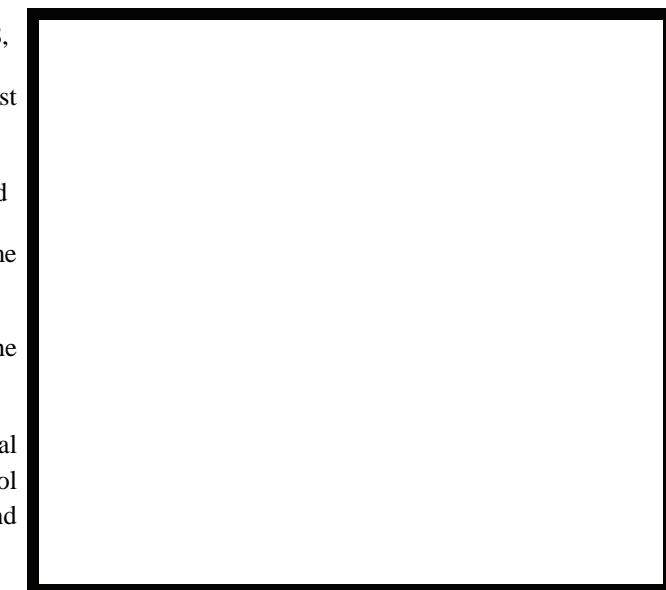
Curative Medical Care Services: outpatient medical care, pharmaceutical services, laboratory services and medical diagnostic services, oral health services, physical rehabilitation, hospital services and other support services (e.g. radiology);

Disease Prevention & Control: integrated control of communicable and non-communicable diseases and management of the Health Information System;

Environmental Health: project design, surveying, project implementation and environmental sanitation;

Emergency Preparedness and Response: provision of emergency health care assistance in response to crises that impact on the Palestine refugees; and

Research Unit: coordination of Agency operational research and technical support to Fields in their specific research projects. The research unit also publishes relevant research conducted by the programme in international medical journals increasing the visibility of the Agency.



AREA STAFF	HQ	Jordan	Lebanon	Syria	Gaza Strip	West Bank*	Total
Medical care services							
Doctors**	4	96	51	54	147	71	423
Pharmacists	1	2	2	1	2	3	11
Dental Surgeons	0	30	19	19	35	15	118
Nurses	0	261	119	129	295	222	1026
Paramedical***	1	129	28	71	130	96	455
Admin/support staff	7	85	48	45	119	61	365
Labour category	0	101	53	64	122	84	424
Sub-total	13	704	320	383	850	552	2822
Environmental health services							
Engineers	0	1	2	1	2	1	7
Admin/support staff	0	29	1	11	31	23	95
Labour Category	0	295	190	98	385	191	1159
Sub-total	0	325	193	110	418	215	1261
INTERNATIONAL	4	0	0	0	0	0	4
Grand total	17	1029	513	493	1268	767	4087

* Including staff of Qalqilia hospital; ** Including senior managerial staff, specialists and school medical officer; *** Including laboratory technicians, Asst. pharmacists, X-Ray technicians and dental hygienists

Human resources

During 2008, 4087 professional, administrative, support and other staff provided comprehensive health services to the registered Palestine refugee population utilizing UNRWA services in Jordan, Lebanon, Syria, Gaza Strip and the West Bank. The services comprised preventive and curative medical care, environmental health services in camps and supplementary feeding to nutritionally vulnerable groups.

The staff to population ratios in 2008 continued to be very low compared to national and regional standards, even if calculated based on served population, and not the total number of registered refugees.

Coupled with high utilization rates, the low staff and population ratios continued to be the reason for the heavy workloads at UNRWA's primary health care facilities. One of the major objectives of the Medium Term Plan is to reduce excessive workloads by recruiting additional staff and improving access to basic health services through expansion and upgrading of primary health care facilities. However, achieving these objectives depends on the level of funding the Agency's receives in the future. Moreover chronic difficulties in the recruitment and retention of staff, both at the managerial and professional levels, have continued to hamper efforts to maintain the level of Health

Programme staff. This is partially due to the low pay scales in UNRWA and the lack of career planning programmes over the past ten years, owing to the discontinuation of external support for the Agency's post-graduate fellowship programme. In spite of regular training to upgrade the skills and capabilities of staff, it has become increasingly difficult to preserve the investment in primary health care staff training, and unless additional resources become available to the Programme, the UNRWA health system will suffer without well-trained and adequately paid health care workers.

Notwithstanding those difficulties the health workforce expanded by 23%, from 3,426 workers in 2000 to reach 4,199 in 2007, with 54% additional doctors and 78% dental surgeons. Most of the expansion took place in Gaza Strip and emergency funds helped to finance this growth. However this year we observe a decline in the health workforce. This could be due to the fact that despite the new recruits, the UNRWA workforce, particularly the medical doctors' one, is ageing. Within ten years, about 40% of the medical doctors now active will have left, if retirement age remains at 60.

The Health programme is currently investigating alternative strategies to improve the efficiency of health delivery with present resources through external evaluations and targeted operational research.

Table 2 - Number of staff per 100,000 served population

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
Physicians	8.7	21.5	16.2	16.9	13.7	13.8
Nurses	23.6	50	38	33.9	42.8	33.5

Table 3 - Breakdown of budget & expenditure by sub-programme, 2008 (thousand US\$)

Programme	Allotted Budget**	Expenditure	% from allotted budget
Programme Management	3663	3803	103.8%
Sub-total	3663	3803	103.8%
Medical Care Services			
Laboratory services	3338	3300	98.8%
Out-patient services	34 208	33 398	97.6%
Maternal & child health	3877	3963	102.2%
Disease prevention & control	5840	4038	69.1%
Physical rehabilitation	1037	1042	100.4%
Oral health	3658	3392	92.7%
School health	693	684	98.5%
Hospital services	15 425	15 345	99.4%
Psychosocial Support (Mental Health)	192	49	25.5%
Sub-total	68 268	65 211	95.5%
Environmental Health			
Sewerage & drainage	142	138	97.1%
Solid waste management	14 630	15 230	104.1%
Water supply	1128	1087	96.3%
Sub-total	15 900	16 455	103.4%
Supplementary feeding	2716	457	-116.8%
Grand total	90 547	85 012	93.8%

Financial resources

The allotted Health Programme Budget in 2008 was US\$ 90 million which represented US\$ 19.4 per registered refugee. However, the total Health Programme expenditure in 2008 amounted to approximately US\$ 85 million, and expenditure per registered refugee was US\$ 18.2.

Even if a more conservative approach was used to estimate the per capita budget and expenditure based on the number of population served by the Agency (approximately three million) rather than the total number of registered refugees (4.6 million), the annual per capita allocation is US\$ 27.7 per capita per year Agency-wide. Below the US\$ 30-50 per capita that WHO recommends for the provision of basic health services in the public sector.

Expenditure on supplies (mainly medicines) was US\$ 14.41 million and outsourced services (mainly hospital services) were US\$ 15.4 million. Table 3 shows the 2008 budget allocations and expenditure for the Health Programme by sub-programme. Even though financial constraints have been a source of concern for the UNRWA Health Programme for decades, a recent evaluation of the financial status has highlighted that the total health expenditure increased by 64% from 2002 to 2007. Syria Field grew the most (+103%), and the West Bank the least (+40%). Gaza, Jordan and Lebanon recorded 66%, 70% and 74% increases, respectively. Agency-wide, health expenditure per served refugee increased from US\$23.2 in 2002 to US\$36.8 in 2007. The Field with the highest health expenditure per served refugee in 2007 was Lebanon, with US\$87. The lowest was Jordan with US\$16. Gaza (US\$45), West Bank (US\$49) and Syria (US\$31) fell in between the extremes [1].

A decade ago, health expenditure was US\$45 per refugee in Lebanon and US\$10 in Jordan (Jacobsen, 2000). Table 4 shows the health expenditure per refugee per Field in 2008 as per regular budget, the differential has remained unchanged.

Syria is the only Field where the per capita allocations for health correspond to the Agency-wide average, whereas Lebanon is far above all other Fields. There is a large expenditure gap between Lebanon and Jordan. This is due to the heavy investment in secondary and tertiary care made necessary in Lebanon because Refugees are denied access to public health services and cannot afford the cost of treatment at private facilities. Conversely in Jordan, UNRWA Registered Palestine Refugees have full access to the Government social and health services and therefore such investments are not necessary.

UNRWA's main focus is on comprehensive primary health care delivery, with very selective use of hospital services that are mostly contracted for. Allocations for hospital services in 2008 represented only 17% of the total Health Programme Budget. This percentage will probably increase in the future because of the increase in morbidity of chronic non-communicable diseases, often associated with major complications, and the rapid increases in the cost of hospital services that we have been witnessing in recent years. This will represent a major challenge for the Health Programme, which has to strive to preserve its notable achievements in primary health care while attempting to cope with increased hospitalization costs.

Unlike UNRWA, public health expenditure in host countries is higher in the areas of secondary and tertiary care than in primary health care. This explains the wide disparity between UNRWA allocations for health and the public health expenditure of host authorities.

Table 4 - Health expenditure per refugee, 2008 regular budget (US\$)

Jordan	Lebanon	Syria	Gaza Strip	West Bank	All Fields
9.9	36.4	20.6	25.3	24.5	19.4

Infrastructure

UNRWA manages a network of 137 health care facilities and one hospital in its area of operations. The number of health facilities grew from 104 in 1990 with the Gaza Strip (+11), Lebanon (+8) and the West Bank (+7) benefiting the most from this expansion. Overall investment on infrastructure in the past six years, both in maintenance of existing facilities and construction of new ones, has been modest and consistently whereas most old health facilities are rather large buildings, the latest additions are reportedly smaller.



Al Msheirfeh Health Centre (Jordan)

In 2008 the following UNRWA facilities were expanded, rehabilitated or newly established:

- In Jordan, the expansion of Talbiyeh Health Centre was completed;
- In Gaza, a newly established health centre in Khan Younis was completed, equipped and made fully operational;
- Tal Sultan health centre, also in the Gaza Strip, was rehabilitated and made fully operational;

- In the West Bank, four Health Points were newly established (Beit Awwa, Budrous, Hebleh, and Rummaneh);
- In Lebanon, four Health Centres were newly established, namely Bar Elias, Wadi El-Zeineh, Kafer Baddeh, and Naher El-Bared; and
- In Syria, the training hall in Damascus area was upgraded.



In 2008, the book “*UNRWA Health Centre Infrastructure Standards*” was jointly produced by the Departments of Health and of Infrastructure and Camp Improvement.

It is the first time that such a document, offering the specific guidelines for health centre construction Agency-wide, is produced.

It represents a valuable tool for planning and maintaining health facilities, and is part of a global process of health care network rationalization that is currently being undertaken by the Health Programme.

Progress in 2008

Major progress was made during 2008 in improving programme management including data collection and analysis, institutional capacity building, revision of technical guidelines and intervention strategies, operational research and evaluation of system performance and outcomes.

The Health Information Systems

The Management Health Information System (MHIS), which is the primary data collection tool used by the Health Programme, is well functioning in all 137 health centres. Most of the health centres are provided with computers, but in some of the small health centres and health points where computers are not available, data is collected on paper forms and then entered at either Area or Field level.

The data obtained from the Maternal Health and Family Planning module of the MHIS were analyzed at Field and Headquarters level and discussed at the annual Field Family Health Officers meeting. The Non-communicable Disease module was also analyzed and indicators were evaluated during 2008. Feedback was sent to all Fields and the results will be further discussed during the Field Disease Control Officers meeting that will take place at the beginning of 2009.

The electronic family file system used in all Health Centres and Fields, proved to be a useful tool for better evaluation and more accurate estimation of the

population served. It also has the function of detecting duplications by both name and ration card number.

The Geographic Information System

During 2008 the Health Department continued the expansion of the Geographic Information System (GIS) at Headquarters' level. A set of statistical, epidemiological and graphic standards for UNRWA health mapping were defined by HQ in collaboration with the West bank GIS Unit, and the “*UNRWA Guidelines for Health Mapping*” booklet was published. GIS has proved to be a very useful tool for illustration of demographic and health data, some of the produced maps are included in this report.

Staff development

In 2008, the Health Department continued to focus on:

- Upgrading the skills and capabilities of the various professional categories;
- Implementing approved intervention strategies; and
- Training staff in technical guidelines and procedure manuals.

During the year, 6925 staff/days of in-service training were conducted in the five Fields at an average of 6.1 training days per medical officer and 3.7 training days per nurse.



The training covered all programme components including: management, maternal and child health and family planning, control of communicable and non-communicable diseases, basic laboratory techniques and rational prescribing of drugs.

In addition to in-service training activities, the Agency supported basic and post-graduate training in Public Health of 39 staff at local universities as outlined in Table 6.

The highest rate of females recruited was among Laboratory Technicians at 50% and the lowest was among dental surgeons and medical officers.

The highest percentage of females recruited was in the Gaza Strip at 56%, followed by Syria at 40%, Jordan at 28%, the West Bank at 27.8%, and the lowest was in Lebanon at 27%.

Gender mainstreaming

Gender mainstreaming is a cross-cutting issue considered in all the Programme's activities. For the last three years several initiatives have raised the health staff awareness on gender equality. In accordance with the UN policy on gender equity and equality, the UNRWA Health Department has been encouraging the recruitment of female staff into various positions, while remaining mindful of the need for competitive selection processes. Table 7 shows the percentage of women recruited to the Health Department in the different categories. The overall rate, Agency-wide for 2008 was 36.0%.



Table 5 - Breakdown of staff/days training by Field and staff category

Field	Medical	Nursing	Other	Total
Jordan	496	360	343	1199
Lebanon	216	414	98	728
Syria	583	567	158	1308
Gaza Strip	406	1065	246	1717
West Bank	568	963	442	1973
Agency	2269	3369	1287	6925

Table 6 - Basic and post-graduate training

Field	Category	N	Course	Start Date	Sponsor
Jordan	Medical Officer	1	Master Degree Public Health	Jan. 2008	Own expense
	Dental Surgeon	1	Master Degree Public Health	Jan. 2007	Own expense
Gaza Strip	Medical Officer	4	Master Degree Public Health	Sept. 2005	Partially UNRWA
	Senior Staff Nurse	1	Master Degree Public Health	Sept. 2005	Partially UNRWA
	Medical Officer	1	Master Degree Public Health	Sept. 2005	Own expense
	Medical Officer	1	Master Degree Public Health	Sept. 2006	Own expense
	Senior Staff Nurse	1	Master Degree Public Health	Sept. 2006	Own expense
	Medical Officers	12	Master Degree Public Health	Sept. 2007	Walid Bin Tala Saudi Arabia
	Staff Nurse	3	Master Degree Public Health	Sept. 2007	Walid Bin Talal Saudi Arabia
	Medical officer	1	Master Degree Public Health	Sept. 2007	Own expense
West Bank	Medical Officer	2	Diploma in child health	Sept. 2008	Royal college, Juzoor & Alquds Univ.
	Senior Staff Nurse	1	Diploma in child health	Sept. 2008	Royal college, Juzoor & Alquds Univ.
	Medical officer	2	Mental Health	Sept. 2008	Juzoor
	Senior Staff Nurse	2	Mental Health	Sept. 2008	Juzoor
	Midwife	1	Bachelor Degree Midwifery	June 2008	Own expense
	Deputy Pharmacist	1	Master Health Policy & Management	Sept. 2008	Partially UNRWA
	Senor Staff Nurse	1	Master Degree Public Health	Sept. 2008	Partially UNRWA
Syria	Medical Officers	2	Master Degree Public Health	Jan. 2006	Ministry of Health & UNRWA
	Dental Surgeon	1	Master in Public Oral Health	Sept. 2007	Karim Rida Said Found & UNRWA
Lebanon	Laboratory Officer	1	Master Public Health	Sept. 2008	Own expense

Table 7 - Percentage of women employed in the Health Programme

Staff categories	Percentage of women staff					
	Jordan	Lebanon	Syria	Gaza Strip	West Bank	All
Specialists	10	20	50	35	16.6	26
Medical Officers	12	30	30	24	5.4	20
Dental Surgeons	26	14	21	26	8.3	19
Pharmacists	0	100	100	0.0	33.3	47
Asst. Pharmacists	39	28	41	52	61.1	44
Lab. Technicians	45.0	33	52.0	61.0	59.0	50
All categories	28	27	40	56	27.8	36



Health Programme strategic planning

2008 was a very important year in strategic planning for the Health Programme with the definitions of a full scale of indicators (outcome, output and impact) for the Field Implementation Plan (FIP) through a strong collaboration between the Health Policy and Planning officer and the Chiefs and Deputy Chiefs in all the Fields. The FIP is a process by which Fields have identified their strategic priorities and approaches within the framework set by the Agency's Medium Term Strategy (MTS) that will translate into Field outcomes, outputs and indicative budgets. The indicators produced in 2008 will be applied in the next financial term reports and will enable the Agency to acquire standardized and comparable data through a rational number of indicators that will not require excessive efforts in data collection.

Also Headquarter (HQ) went through its own definition of indicators for the HQ Implementation Plan (HIP) 2008 following the same participative approach adopted in and consistent with the FIP. The HIP is a short operational and budget plan which reflects how in particular the UNRWA HQ Health Department will provide the support necessary for the Agency to deliver the services and outputs included in the FIPs for 2010-2011.

Monitoring and evaluation

Research is essential to medical assistance as well as to rational health programme planning. It is the production and application of knowledge to improve the organization of resources in order to achieve health goals. In UNRWA it is a tool used from health need assessment and monitoring to evaluation. It allows us to measure our progress in achieving the highest possible level of health for our beneficiaries allowing us to compare the health status of Palestine refugees with that of other populations in and outside UNRWA's area of operation through the identification of common indicators (for example MDGs). Another aspect related to research is the compilation of reviews of current best practices in clinical medicine and in public health,

crucial to maintain contact with the evolution of medical science and produce updated and evidence based guidelines for the management of the different aspects comprehensive primary health care delivery.

Historically the UNRWA has achieved great clinical and public health breakthroughs thanks its critical and innovative approach to health. In its early years it introduced Oral Rehydrating Solution in the treatment of mild dehydration in diarrheic infants (Najjar salts). The success of this method cemented the widespread use of oral rehydration therapy by international agencies and globally.

Moreover it was highly effective in eradicating malaria with pilot programmes in the Jordan Valley. Research for health is at the same time extremely specialized and vast. It encompasses communicable and non communicable diseases, mother and child health, drug utilization, antimicrobial resistance, but also dwells on health service analysis and evaluation with studies on patient flow and assessment of the quality of health delivery against international standards.

Internal/Self-assessments

The following major analytical reviews/self-assessments were undertaken during the reporting period:

- Assessment of trends in utilization and productivity of laboratory services;
- Assessment of trends in utilization and productivity of oral health services at Field level;
- Disease prevention and Control Programme review in all Fields;
- Comprehensive program review of the Health protection and Promotion sub-programme;
- Assessment of Immunization coverage with TT for pregnant women;
- Risk status assessment of pregnant women;
- Modern contraceptive method mix assessment; and

- Immunization coverage of children (a joint assessment of the Health protection and Promotion sub-programme with the Disease Prevention and Control sub-program).

Guidelines and Evaluations

One major production of the HQ Health Department throughout 2008 has been the *Epidemiological Surveillance and Outbreak control (ESOC) Toolkit*, comprising updated *Guidelines for Epidemiological Surveillance*, *UNRWA Guidelines for Health Mapping* and the first *Epidemiological Report of the Agency*. It is part of a comprehensive revision and update of epidemiological surveillance in UNRWA with review of surveillance procedures, including Early Warning (EWAR), case definitions, indicators and standards. Also in 2008, however, the entire Health Programme, under the lead of HQ specialists, produced the first *Laboratory Based Antimicrobial Resistance Routine Surveillance Report* adapted to a target not only of laboratory technicians but also of clinicians. We should also mention the strong infra-departmental collaboration was the behind the completion of the *UNRWA Health Centre Infrastructure Standards* defining all aspects of health service delivery in UNRWA facilities.

2008 was also a year of evaluations, including a comprehensive assessment of the entire Health Programme. Specific aspects evaluated in the same year included oral health and the pharmacy.

Operational Research

The Health Programme has been producing high quality medical research, published internally and in international indexed journals for several years. This is thanks to its technically qualified and highly motivated staff both at HQ and Field level. We can divide the types of research studies conducted in the Health Department in two major categories: periodically conducted surveys to monitor specific health indicators and dedicated



Some of the guidelines and reports produced by the Health Programme in 2008

studies conducted to find answers to specific questions. In both cases studies have been conducted either exclusively by UNRWA staff or jointly with other research institutions and Universities.

Examples of periodic surveys conducted every 4 years

- Survey on anaemia prevalence;
- Infant mortality Survey;
- Youth Tobacco Survey; and
- Client satisfaction survey.

Examples of dedicated studies completed by HQ in 2008

- Quality Survey of Five Hospitals of the Palestine Red Crescent Society in Lebanon;
- Screening For Diabetes And Hypertension Among Palestine Refugees;
- Utilization Trends in UNRWA Health Centers. An analysis of patients attendance to clinics in Jordan, Syria and Lebanon; and
- Causes of repeat visits in UNRWA Health Centres.

Examples of dedicated studies completed by the Fields in 2008

- Patient flow analysis (West Bank);
- Excellent Service Initiative (Gaza Strip);
- Breast Cancer Screening (Syria); and
- Valid vaccination coverage (Gaza Strip).

The retrospective analysis of patient files in the “Causes of repeat visits in UNRWA Health Centres” study, HQ staff worked in close contact with Field researchers in all phases of design, data collection and insertion.

The Assessment of PRCS hospitals was conducted in Lebanon and in this case HQ conducted a study needed to implement policy decisions at Field level thus providing its assistance by following all phases of the study.

Technical support role of the HQ Health Department

Research is one of the activities where the role of support of HQ is evident. Only in 2008 HQ epidemiologists and public health specialists have conducted four studies in close collaboration with the Fields:

- The epidemiological investigation of a mumps epidemic;
- The Access Study;
- The Repeat Visit Study; and
- The quality assessment of PRCS hospitals.

The epidemiological investigation of the mumps epidemic in the West Bank was a joint effort of HQ, West Bank Field Office in collaboration with the Chaim Sheba Medical Center and Tel-Aviv University. It was accepted as an oral report in the ECCMID 2008 congress in Barcelona, was published as an internal report and also recently published in the form of a scientific article in the Journal of Clinical Microbiology.

The Access Study is an ongoing project of the West Bank Research Office and the Health Programme (HQ and WB Field). The study design was conducted in collaboration with HQ, data collection and analysis was performed at Field level and now HQ has again been asked to provide support in the elaboration of the study final report.



A research team collecting data in an UNRWA Health Centre in the Gaza Strip, 2008

Advocacy

In 2008 the UNRWA Research Team both at HQ and Field level was involved in the production of three articles for a prestigious medical journal (*The Lancet*).

Advocacy for Palestine Refugee health through the scientific community is an important alternative channel that the UNRWA health programme is pursuing.

The Lancet publications are only a part of the extensive activity of the Health programme research unit is conducting, as can be seen from the list of publications of the Health Department HQ Amman from January 2008 to March 2009 (2009 publication refer to research activities conducted in 2008):

- “*UNRWA Annual Report of the Department of Health 2007*” available online http://www.un.org/unrwa/publications/pdf/ar_health2007.pdf;

- G. Sabatinelli, S. Pace-Shanklin, F. Riccardo, A. Khader “*Facing socio-economic decline: delivering health to Palestine refugees*”. *Babylon Tidsskrift om Midtøsten og Nord-Afrika* 6. årgang, nr. 1, 2008;
- H. Abu Mousa Salem, Y. Shahin, F. Riccardo , W. Zeidan, G. Sabatinelli “*Detection rate of diabetes and hypertension among Palestine refugees*”. Accepted for publication in the Eastern Mediterranean Health Journal;
- G. Sabatinelli, S. Pace-Shanklin, F. Riccardo, Y. Shahin. “*Palestine refugees outside the occupied Palestinian territory*” *The Lancet*, Early Online Publication, 5 March 2009 doi:10.1016/S0140-6736 (09)60101-X;
- R. Giacaman, R. Khatib, L. Shabaneh, A. Ramlawi, B. Sabri, G. Sabatinelli, M. Khawaia, T. Laurance. “*Health status and health services in the occupied Palestinian territory*” *The Lancet*, Early Online Publication, 5 March 2009 doi:10.1016/S0140-6736 (09)60107-0;
- Khader , H. Madi , F. Riccardo, G. Sabatinelli “*Prevalence of anemia among UNRWA assisted Palestine refugee pregnant women in Gaza Strip and West Bank*” Accepted for publication in Public Health Nutrition;
- M. Hindiyeh, Y. Aboudy, M. Wohoush, L. M. Shulman, D. Ram, T. Levin, T. Frank, F. Riccardo, M.Khalili, E.S. Sawalha, M. Obeidi, G. Sabatinelli, Z. Grossman, E. Mendelson “*Characterization of Large Mumps outbreak in Vaccinated Palestinian Refugees*” *Journal of Clinical Microbiology* 47(3): 560-565, March 2009.

External cooperation and partnerships

Since 1950, under the terms of an agreement with UNRWA, the WHO has overseen the technical aspects

of the Agency’s Health Programme through the Eastern Mediterranean Regional Office. WHO/EMRO continued to provide on non-reimbursable loan the Director of Health and to cover the salaries and related expenses of Division Chiefs at UNRWA Headquarters. The WHO regularly includes senior UNRWA programme managers in regional technical meetings, conferences and workshops, and supplies the Agency with technical publications and periodicals. The collaborative links between UNRWA and the WHO office in Jerusalem were strengthened in 2008 through arrangements that were made to facilitate access of UNRWA Headquarters to the WHO/EMRO intranet.

The Agency’s Health Programme also maintained close collaborative links with other UN organizations, in particular UNICEF. Cooperation with UNICEF focused on relevant aspects of the Integrated Management of Childhood Illnesses (IMCI) programme, which involved UNICEF continuing to meet Lebanon and Syria Fields requirements of vaccines and cold-chain supplies for the six major vaccine-preventable diseases. In addition, collaborative links were maintained between UNRWA and UNICEF country offices and Host Country MOHs, for implementing two rounds of national immunization campaigns including a mass Polio immunization campaign for children 0-5 years of age in Lebanon. The cooperation with UNICEF was further enhanced to cover future collaboration in promoting the concepts and principles of the Convention on the Rights of the Child (CRC) and psychosocial support.

The UNRWA Health Department also maintained a system of exchange of information with UNFPA and UNAIDS. UNFPA contributed to UNRWA in the West Bank by donating contraceptives and medical equipment. Also UNRWA Health coordinated with the Japanese International Cooperation Agency (JICA) to implement the MCH Handbook in the West Bank and Gaza, and to introduce new growth charts.

Joint activities with the Centre for Disease Control Atlanta (CDC) in 2008 resulted in the Global Youth Tobacco survey being carried out in all UNRWA Fields of operation. A full presentation of findings will be take place in 2009.



Among academic collaborations it is necessary to mention that to the effect of understanding the determinants of chronic public health issues such as anaemia in the West bank, a formal collaboration was established in 2008 with Columbia University in order to conduct a comprehensive survey on nutrition targeting school aged Palestine refugee children.

UNRWA has historically maintained close working relationships with the public health departments of the Host Authorities. UNRWA senior Health staff in the Gaza Strip and the West Bank, enjoy membership on many technical committees established by the MoH of the Palestinian Authority to review aspects of health policy and to coordinate action in the health sector. UNRWA also participated in the work of various national committees on nutrition and food to formulate policies and strategies on food security and micro-nutrients. The MoH of the Palestinian Authority has also been supportive of UNRWA's health care efforts by providing all vaccines included in the expanded programme of immunization in Gaza and the West Bank.

The MoH in Jordan has provided UNRWA with its required quota of contraceptives and vaccines which are used in the expanded programme of immunization, has established in 2008 contract with UNRWA for the provision of hospital services and has encouraged the participation of UNRWA health professional in national technical committees.

The MoH in Syria continued to meet UNRWA's requirements of vaccines that are not covered by UNICEF such as Hepatitis-B and Haemophilus influenzae type b (Hib) vaccines. In Jordan, Lebanon, and Syrian Arab Republic the MoHs also met UNRWA's requirements of anti-tuberculosis drugs and provided advanced laboratory facilities for surveillance of vaccine-preventable diseases and HIV/AIDS.

UNRWA's Health Programme maintained and further developed the longstanding cooperation with the Palestinian Red Crescent Society (PRCS) was further enhanced especially in Lebanon where the Agency maintained contractual arrangements for treatment of refugee patients at the five PRCS hospitals. Cooperation was also maintained with local universities especially the American University of Beirut and Birzeit University in Ramallah, in relation to education and development of science students.

During 2008, the Director of Health, and other senior staff of the Department of Health participated in the following meetings/conferences of the WHO and other stakeholders (Table 8).

Table 8 - Meetings/conferences attended in 2008

MEETING	PLACE AND DATES
123 rd Session of the Executive Board of the World Health Organization	Geneva, 21-26 January 2008
23 rd Meeting of the Regional Directors with WHO Representatives and Regional Office Staff	Cairo, 24-28 February 2008
18 th European Conference of Clinical Microbiology and Infectious Diseases (ECCMID)	Barcelona, 19 - 22 April 2008
WHO Global Forum Chief nursing Officer and Midwives – ILO	Geneva, 14-15 May 2008
61 st Session of the World Health Assembly	Geneva, 19-24 May 2008
Capacity Building Workshop on Health Systems Development for national Policymakers & WHO Staff	Alexandria, 8-12 June 2008
First Regional Expert Consultation on “Hospitals safe from Disasters”	Cairo, 16-17 June 2008
Global Tobacco Surveillance System Training, EMRO	Cairo, 24-26 June 2008
Technical Consultation on the Integration of Non-Communicable Diseases into Primary Health Care	Cairo, 22-24 July 2008
55 th Session of the Regional Committee, EMRO	Cairo, 11-14 October 2008
25 th Inter-Country Meeting of National Managers of the Expanded Programme on Immunization	Alexandria, 21-23 October 2008
International Conference for Primary Health Care	Doha, 1-4 November 2008
Annual Meeting of the Inter-Agency Working Group (IAWG) on Reproductive health in Crisis, EMRO	Cairo, 5-7 November, 2008
WHO training course on Child Growth Assessment	Kuwait, 10-13 November, 2008
18 th Inter-Country Meeting of National AIDS Programme Managers	Alexandria, 17-18 November 2008
Inter-Country Meeting on Measles/Rubella Control/Elimination	Dubai, 23-25 November 2008



The Health Programme strategic outlook: the medium term strategy

There are signs that UNRWA's health system would benefit from significant reform and modernisation in the years ahead to enable it to better deal with growing pressures. New approaches need further examination before implementation, but elements might include more partnerships, more outsourcing of services, and focusing on services neglected by others.

In the medium term, key steps to shore up the system in advance of broader reforms are needed. Under the goal of enabling Palestine refugees to have a long and healthy life, UNRWA has three strategic objectives for the medium term: to ensure universal access to quality comprehensive primary health care; to protect and promote family health and to control and prevent diseases. These objectives will be achieved through interventions led by UNRWA's Health Programme [2].

References

1. Enrico Pavignani "External assessment of the UNRWA Health Programme" March 2009
2. UNRWA Medium Term Strategy 2010-2015.

Annexes

Contents



The annexes to the UNRWA annual report of the department of health are grouped in four sections:

1. Health Fact sheets, 2008;
2. Health Maps, 2008;
3. Contacts of Senior Staff of the UNRWA Health Programme; and
4. Abbreviations.

Annex 1 - Health Fact Sheets 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
A- DEMOGRAPHIC INDICATORS						
- Registered refugee population in thousands	1952	422	462	1073	763	4672
- Percentage of camp population to total registered refugees	17.3	52.8	27.1	46.1	25.3	29.4
- Percentage of refugees to total country/district population	31.5	10.6	2.3	71.5	31.7	13.8
- Growth rate of registered refugees (%) ⁽¹⁾	2.5	1.9	2.3	2.3	2.2	2.3
- Total fertility rate ⁽²⁾	3.3	2.3	2.4	4.6	3.1	3.2
- Percentage of children below 18 years of age	35.6	28.3	35.4	46.2	38.4	37.8
- Percentage of women of reproductive age (15-49 Years)	26.0	27.4	25.8	23.7	25.0	25.4
- Percentage of population 40 years and above	27.7	35.3	29.3	21.2	27.3	27.0
- Aging index	38.7	59.9	36.5	20.7	34.8	34.1
- Average family size ⁽²⁾	5.1	4.9	4.7	5.8	5.8	5.3
B- UNRWA's HEALTH INFRASTRUCTURE						
<u>Primary health care (PHC) facilities :</u>						
a- Inside official camps	13	13	10	10	19	65
b- Outside camps	11	16	13	10	22	72
Total	24	29	23	20	41	137
c- Ratio of primary health care facilities per 100,000 population	1.2	6.9	5.0	1.9	5.4	2.9
<u>Services integrated within PHC facilities :</u>						
a- Laboratories	24	17	21	17	40	119
b- Dental clinics						
· Stationed units	27	17	19	19	22	104
· Mobile units	4	2	1	3	1	11
c- Family planning	24	29	23	20	38	134
d- Special care for non-communicable diseases	23	29	23	17	40	132
e- Specialists	9	10	5	16	7	47
f- Radiology facilities	2	3	0	5	9	19
g- Physiotherapy clinics	1	0	0	9	6	16
h- Hospitals ⁽³⁾	0	0	0	0	1	1

I- Rates are calculated based on population figures as per UNRWA Registration Statistics, 2- UNRWA study, 2005, 3- Only one hospital run by UNRWA in Qalqilia, otherwise hospital care is provided through contractual arrangements or reimbursement of costs.

Annex 1 - Health Fact Sheets 2008

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
C- BUDGETARY AND HUMAN RESOURCE INDICATORS						
- Health personnel per 100,000 registered refugees						
· Doctors	4.9	12.1	11.7	13.7	9.3	9.1
· Dental surgeons	1.5	4.5	4.1	3.3	2.0	2.5
· Nurses	13.4	28.2	27.9	27.5	29.1	22.0
- Annual per capita budget allocations on health US \$	9.9	36.4	20.6	25.3	24.5	19.3
- Total allocations on health as percentage from approved regular budget	16.2	25.0	22.6	15.6	22.5	17.9
- Average expenditure on pharmaceuticals per outpatient medical consultation US\$	2.3	2.5	1.5	1.8	1.9	1.98
D- HEALTH STATUS INDICATORS						
-Infant mortality rate per 1000 live births⁽¹⁾	22.5	19.2	28.1	25.2	15.3	22
- Infant mortality rate per 1000 live births by sex⁽¹⁾						
- Boys	23.6	18	33.1	26.6	15.7	
- Girls	20.8	20.3	22.5	22.8	14.8	
- Neonatal mortality rate per 1000 live births⁽¹⁾	13.5	15	22.9	17.1	9.3	15.3
- Child mortality rate (below 3 years) per 1000 live births⁽¹⁾	25.1	20.2	30.5	28.3	17.6	24.4
- Percentage of women married by the age < 18 years⁽²⁾	21.2	26.1	21.1	34.7	35.4	27.7
- Mean birth interval (months)⁽²⁾	36.3	41.0	41.3	32.4	38.3	37.9
- Percentage of women with birth intervals ≤ 24 months⁽²⁾	35.7	32.2	31.1	42.2	31.9	35.6
- Prevalence of modern contraceptives among women of reproductive age utilizing UNRWA MCH services⁽²⁾	53	69	67.2	33.7	56.3	55.4
- Mean marital age (women)⁽²⁾	20.4	20.2	20.7	19.1	19.2	19.9
- Percentage of infants breastfed for at least one month⁽³⁾	75.9	87.2	78.3	65.0	87.1	78.9
- Prevalence of exclusive breast feeding up to 4 months⁽³⁾	24.0	30.2	40.3	33.3	34.5	32.7
- Prevalence of anaemia among children < 3 years of age⁽⁴⁾	28.4	33.4	17.2	54.7	34.2	33.8
- Prevalence of anaemia among pregnant women⁽⁴⁾	22.5	25.5	16.2	35.6	29.5	26.3
- Prevalence of anaemia among nursing mothers⁽⁴⁾	22.2	26.6	21.7	45.7	23.0	28.6
- Prevalence of anaemia among school children⁽⁴⁾						
- 1st grade	14.4	22.3	9.1	36.4	14.6	19.5
- 9th grade	11.6	16.9	6.0	11.4	14.9	12
- Percentage of pregnancies at high or moderate risk	38.2	33.3	36.0	0.0	36.4	0.0
- Prevalence of diabetes among population served, 40 years and above (%)	9.3	10.1	10.9	12.7	11.1	10.7
- Prevalence of hypertension among population served, 40 years and above (%)	13.8	19.9	18.5	18.9	15.3	16.4
- No. of cases of communicable diseases reported						
· Pulmonary TB smear positive	2	3	15	4	1	25
· Measles	15	2	2	1	20	40
· Rubella	35	1	4	1	7	48
· Mumps	54	521	45	16	39	675
· HIV/AIDS	0	1	0	0	0	1

1- UNRWA study, 2003; 2- UNRWA study, 2005; 3- UNRWA study, 2001; 4- UNRWA study 2004; 5- No cases of diphtheria, neonatal tetanus or poliomyelitis were reported during the year.

Annex 1 - Health Fact Sheets 2008

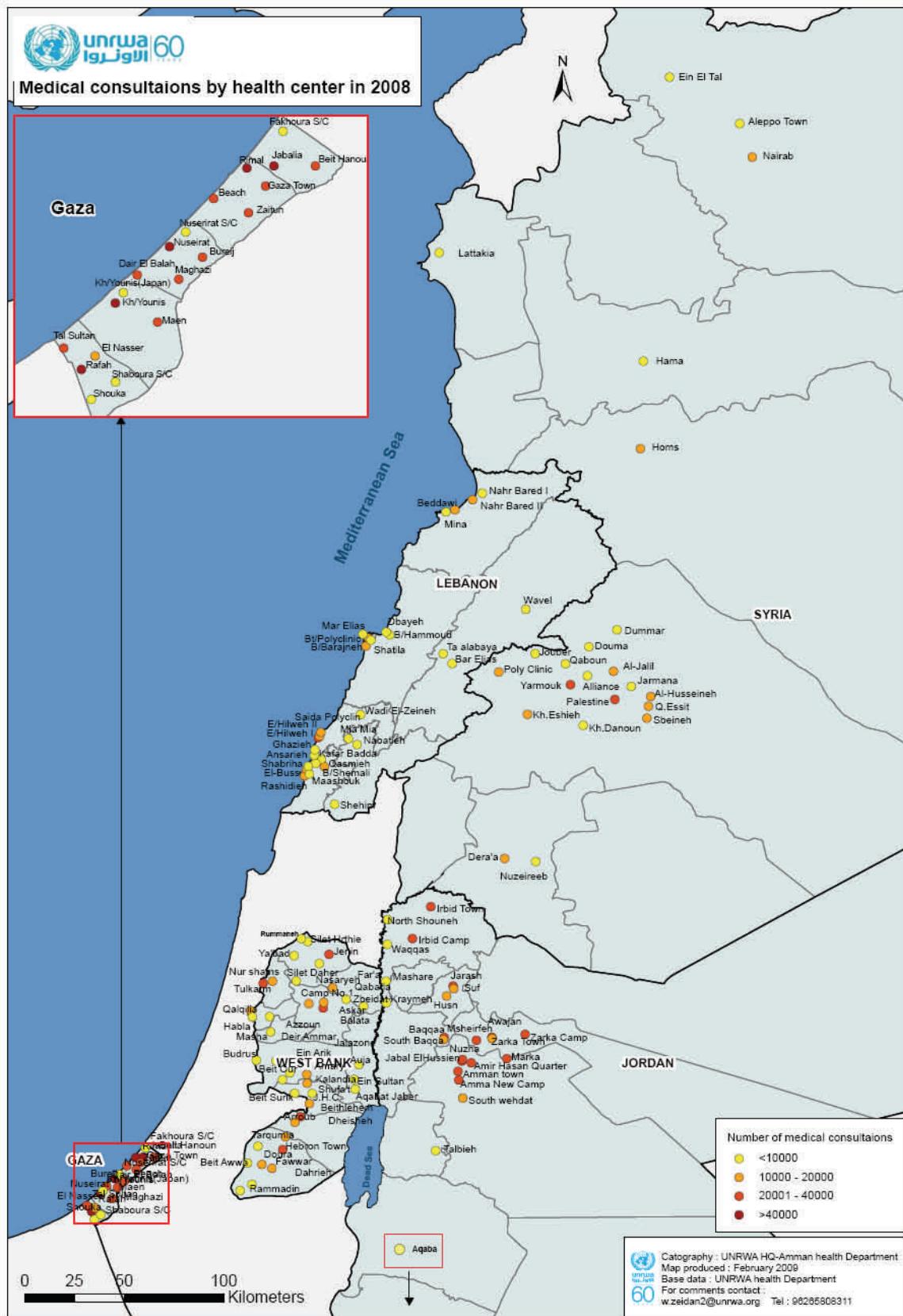
	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
E- INDICATORS OF COVERAGE WITH PRIMARY HEALTH CARE						
- Percentage of pregnant women who received antenatal care	59.7	77.9	95.6	103.8	68.4	77.6
- Percentage of pregnant women who paid at least four *	87.9	95.9	87.6	96.0	83.6	90.3
ante-natal visits to UNRWA MCH Clinics						
-Average No. of antenatal visits	6.5	7.4	6.1	8.4	7.4	7.4
- Proportion of pregnant women registered during the first trimester *	70.8	88.4	71.7	79.4	72.9	74.9
- Percentage of pregnant women protected against tetanus	99.6	98.5	99.8	99.3	99.7	99.4
- Percentage of pregnant women delivered by trained personnel *	99.9	99.6	99.6	100.0	99.6	99.9
- Percentage of deliveries in health institutions *	99.7	98.0	95.3	99.8	98.9	99.1
- Percentage of pregnant women who received postnatal care	91.0	97.5	93.1	99.3	88.8	94.4
- Percentage of surviving infants who received regular care and monitoring	61.4	73.7	97.3	96.4	62.7	75.2
- Percentage of infants 12 months old fully immunized	99.1	100.0	99.5	100.0	99.7	99.6
- Percentage of children 18 months old who received all booster doses of EPI vaccines	98.7	99.7	99.3	100.0	100.0	99.4
- Percentage of camp shelters with access to safe water	99.3	99.8	100	100	100	99.8
- Percentage of camp shelters with access to sewerage facilities	90	82	96	84	63	83
- Number of camps served by UNRWA mechanized refuse collection and disposal equipment	5	12	6	8	16	47
F- PERFORMANCE INDICATORS						
- Average daily medical consultations per doctor	98	102	113	103	89	101
- Average daily consultations per dental surgeon	32.4	37.0	33.1	62.4	27	38.4
- Actual laboratory productivity rate compared to the target of 50 workload units /hour	50.3	47.6	43	78	59.3	56.4
- Actual productivity of dental services compared to the target of 50 workload units per hour	53.8	47.6	51.9	91.7	52.8	60
- Average stay (days) among hospitalized patients	2.0	2.3	1.2	3.4	2.3	2.1
- Average daily bed occupancy (%) in Qalqilia hospital	0	0	0	0	53.3	53.3

* Data obtained through the Management Health Information System , 2007

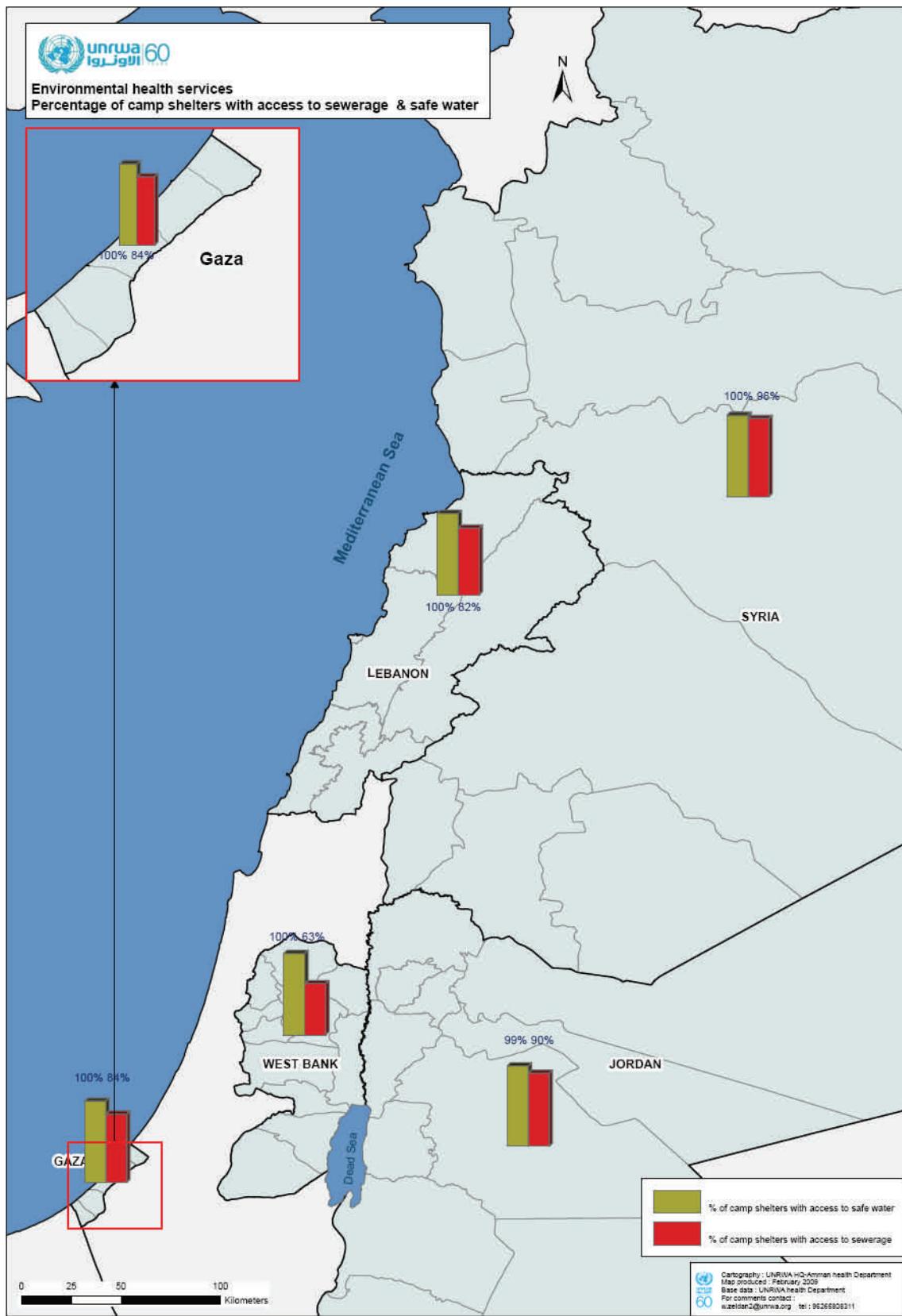
Annex 2 - Health Maps 2008



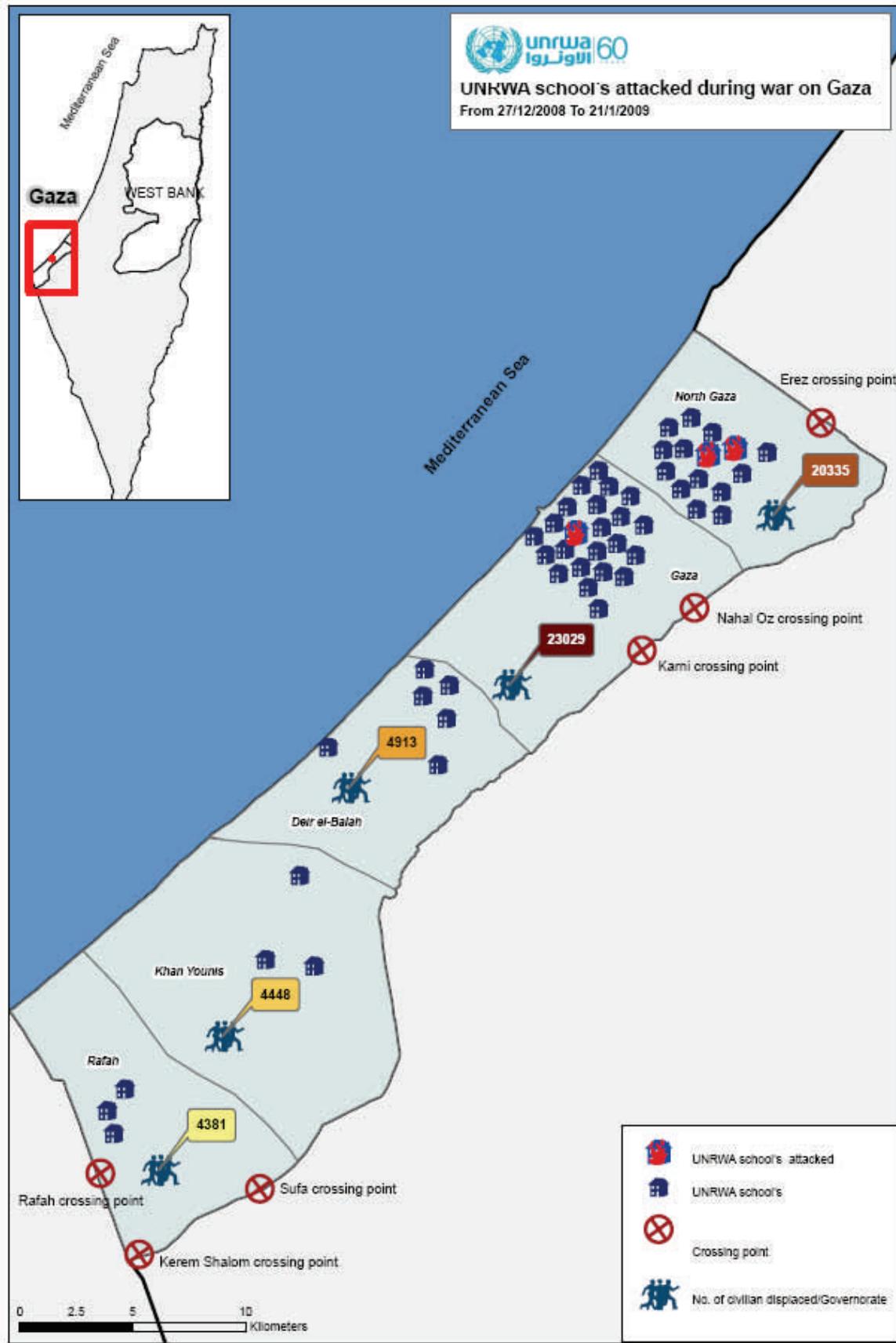
Annex 2 - Health Maps 2008



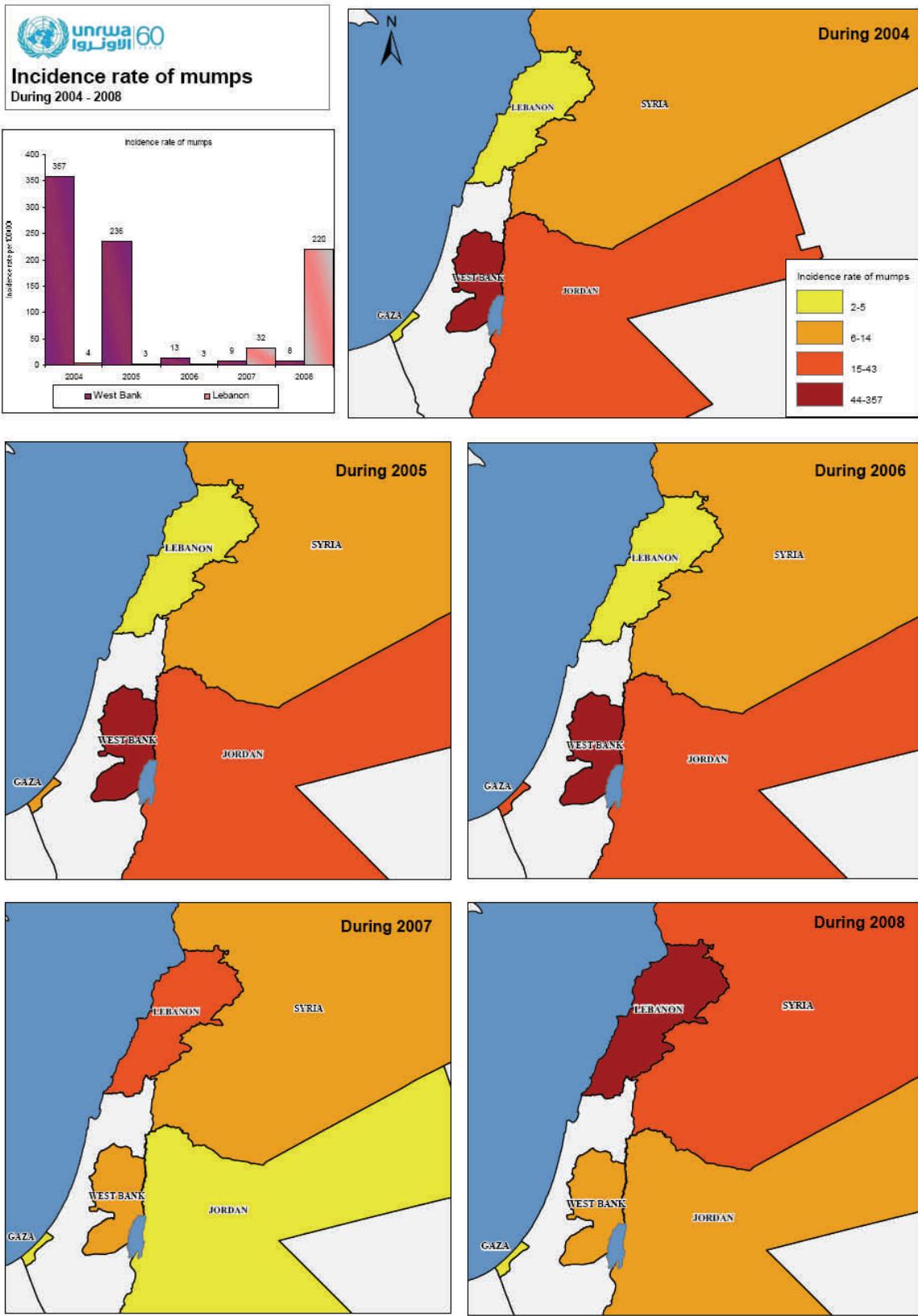
Annex 2 - Health Maps 2008



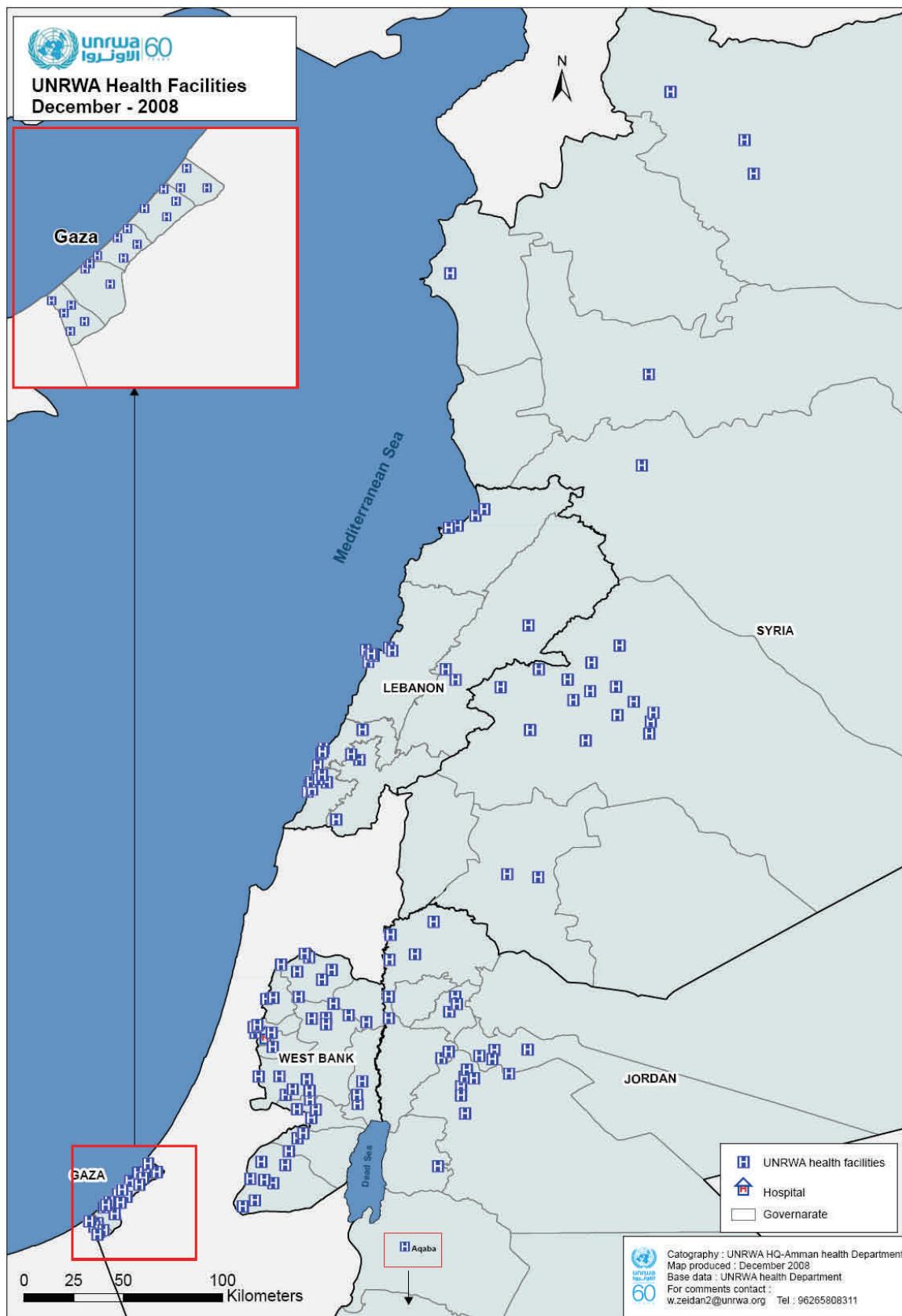
Annex 2 - Health Maps 2008



Annex 2 - Health Maps 2008



Annex 2 - Health Maps 2008



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31 December 2008

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Abbreviations

ACTED	Agency for Technical Cooperation and Development
AEO	Area Education Officers
AHO	Area Health Officers
AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infection
BCG	Bacillus Calmette-Guerin
BMI	Body Mass Index
CDC	Centres for Disease Control & Prevention
CEHA	Centre for Environmental Health Activities - WHO
CRC	Convention on the Rights of the Child
CVD	Cardiovascular Diseases
CYP	Couple-Years of Protection
DFID	Department for International Development
DOTS	Directly Observed Treatment Short-Course Strategy
DPA	Department of Palestinian Affairs
DPT	Diphtheria, Pertussis, and Tetanus
EC	European Community
ECHO	European Community Humanitarian Office
EHSI	Excellent Health Services Initiative
EMRO	Eastern Mediterranean Regional Office
ENT	Ear, Nose and Throat
EPI	Expanded Programme on Immunization
EPSS	Emergency Programme Support Staff
ESCPA	United Nations Economic and Social Commission for Western Asia
EU	European Union
FAO	Food and Agriculture Organization
FDCOs	Field Disease Control Officers
FAI	Fatah al Islam
FFHO	Field Family Heath Officer
FP	Family Planning
FSE	Field Sanitary Engineer
GAPAR	General Authority for Palestine Arab Refugees
GIS	Geographic Information System
Hib	Haemophylus influenzae stereotype b

Abbreviations

HIV	Human Immuno-deficiency Virus
ICRC	International Committee of the Red Cross
IPV	Intramuscular Polio Vaccine
IMCI	Integrated Management of Childhood Illnesses
IDD	Iodine Deficiency Disorders
IUD	Intra-uterine Devices
IUED	Geneva's Graduate Institute of Development Studies
JICA	Japanese International Cooperation Agency
LOS	Length of Stay
MCH	Maternal & Child Health
MDG	Millennium Development Goals
MHIS	Management Health Information System
MMR	Measles, Mumps, and Rubella
MoE	Ministry of Education
MoH	Ministry of Health
MSF	Medicine san Frontiers
NCD	Non-communicable Diseases
NID	National Immunization Days
NGO	Non-Governmental Organizations
NTP	National TB Programmes
OPV	Oral Polio Vaccine
oPt	Occupied Palestinian Territory
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PLO	Palestinian Liberation Organisation
PRCS	Palestinian Red Crescent Society
PRF	Patient Registration File
RSS	Relief and Social Services – UNRWA
SAR	Syrian Arab Republic
SDS	Senior Dental Surgeon
SEHP	Special Environmental Health Programme
SFP	Supplementary Feeding Programme
STDs	Sexually Transmitted Disease
TB	Tuberculosis
Td	Tetanus/Diphtheria

Abbreviations

TFR	Total Fertility Rate
TOT	Trainer of Trainers
TQM	Total Quality Management
UNAIDS	United Nations Programme on AIDS
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Fund for Population Activities
UNRWA	United Nations Relief & Works Agency for Palestine Refugees in the Near East
UNSCO	United Nations Special Coordinator in the Occupied Territories
USAID	United States Agency for International Development
UXO	Unexploded Ordnance
WFP	World Food Programme
WHA	World Health Assembly
WHO	World Health Organization
WLU	Work Load Unit





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