

# **Initial Health Assessment Report Gaza Strip**

**World Health Organization  
Office of the occupied Palestinian territory**

December 2012

## Acknowledgments

This initial health assessment report was produced and edited by the WHO office in the oPt and supported by the WHO Regional Office for the Eastern Mediterranean. WHO partners, including the Palestinian Ministry of Health, UNICEF, UNFPA, and nongovernmental and international organizations contributed information for the report.

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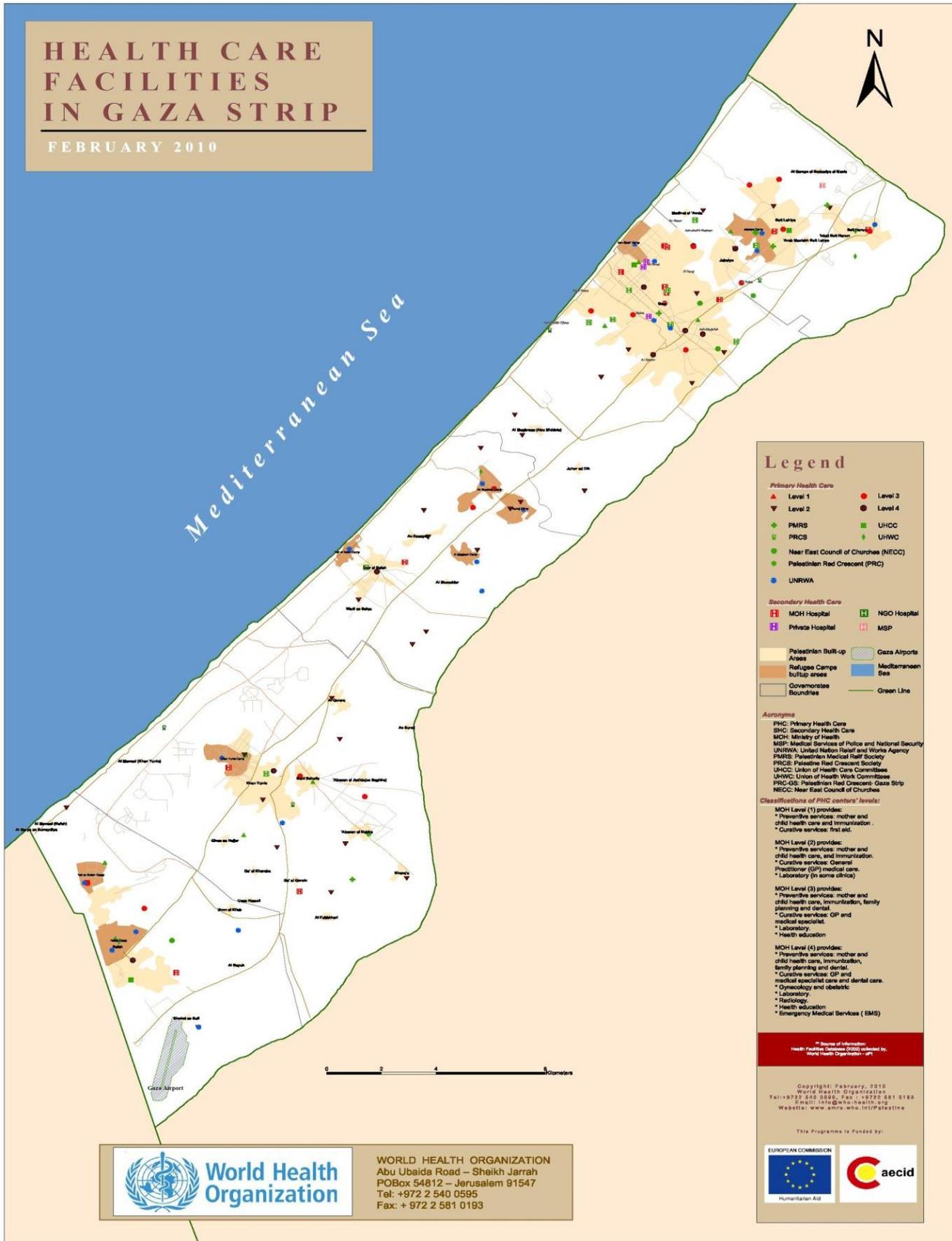
# Initial Health Assessment Report: Gaza Strip

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# HEALTH CARE FACILITIES IN GAZA STRIP

FEBRUARY 2010



## Legend

- Primary Health Care**
- ▲ Level 1
  - ▼ Level 2
  - ◆ Level 3
  - Level 4
  - ◆ PMRS
  - ◆ PRCS
  - ◆ Near East Council of Churches (NECC)
  - ◆ Palestinian Red Crescent (PRC)
  - ◆ UNRWA
- Secondary Health Care**
- MOH Hospital
  - Private Hospital
  - NGO Hospital
  - MSP
  - Palestinian Bull-up Areas
  - Refugee Camps bullup areas
  - Gaza Airports
  - Mediterranean Sea
  - Governorates Boundaries
  - Green Line

**Acronyms**

- PHC: Primary Health Care
- SHC: Secondary Health Care
- MOH: Ministry of Health
- UNRWA: United Nations Relief and Works Agency
- MSP: Palestinian Medical Relief Society
- PRCS: Palestinian Red Crescent Society
- SHCC: Union of Health Care Committees
- UHW: Union of Health Work Committees
- PRC-GS: Palestinian Red Crescent, Gaza Strip
- NECC: Near East Council of Churches

**Classifications of PHC centers' levels:**

**MOH Level (1) provides:**

- \* Preventive services: mother and child health care and immunization.
- \* Curative services: first aid.

**MOH Level (2) provides:**

- \* Preventive services: mother and child health care, and immunization.
- \* Curative services: General Practitioner (GP) medical care.
- \* Laboratory (in some clinics)

**MOH Level (3) provides:**

- \* Preventive services: mother and child health care, immunization, family planning and dental.
- \* Curative services: GP and medical specialist.
- \* Laboratory
- \* Health education

**MOH Level (4) provides:**

- \* Preventive services: mother and child health care, immunization, family planning and dental.
- \* Curative services: GP and medical specialist care and dental care.
- \* Gynecology and obstetric
- \* Laboratory
- \* Radiology
- \* Health education
- \* Emergency Medical Services (EMS)

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This Programme is Funded by:



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## 1. Context

The purpose of this report is to provide an account of how the health system in the Gaza Strip responded to the recent escalation of hostilities in the region, November 14-21, 2012, and a quick assessment of the status of the health system following the cessation of hostilities.

The eight-day period of hostilities placed additional strains on the public health system in Gaza which has been severely affected by the Israeli blockade (in place since 2007) and by the political divide between West Bank and Gaza. The health system is also fragmented with a large number of health providers. Severe shortages of essential drugs and medical supplies, unstable power supply and lack of fuel for generators, and inadequate maintenance capacity and spare parts for medical equipment, have contributed to deterioration in the quality of care. More than 1000 patients are referred monthly for specialized care to health facilities outside the Gaza Strip, but their access to East Jerusalem and West Bank hospitals, and to Israel and Jordan, is restricted by the Israeli permit system.

## 2. Crisis overview

The escalation of violence in Gaza and southern Israel lasted for eight days November 14- 21, 2012, and involved Israeli bombardments and airstrikes on targets in Gaza and rocket fire from Gaza to Israel. The escalation was the most intense of a series of outbreaks since the war in 2009.

In immediate response, the Ministry of Health (MoH) in Gaza formed a crisis management unit and opened an emergency command and control room at Shifa hospital which, together with other MoH hospitals, handled most of the casualty cases. By November 26, 2012, the Palestinian MoH reported 182 fatalities (158 males and 24 females) as a result of the eight days of escalation; 47 (26%) of them were children, including 16 under 5 years old, 12 women and 6 elderly (4 Males and 2 Females) above 60 years old. Most of the fatalities (87.9%) had multiple injuries. The MoH also reported 1399 injuries, 28% were females and 37% (516) were children, one third of whom were under 5 years old and 4.1% (58) above the age of 60 years old (38 Males and 20 Females).

The main challenge to the health sector before and during the crisis was the availability of drugs and medical supplies; more than 40% of the essential drug items in the essential drug list and more than 50% of medical consumables were out of stock before and during the crisis. WHO worked with the Ministry of Health, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) and health partners to ensure that essential medicines and medical consumables were delivered to health facilities where they were needed most.

The Primary Health Care (PHC) directorate of the MoH and UNRWA reported that 13 PHC centers were partially damaged due to indirect shelling (9 MoH, 4 UNRWA). The Jordanian Field hospital sustained serious damage after being directly hit while two other hospitals, the Gaza European and Beit Hanoun hospitals sustained minor damages.

The EMS reported that 3 ambulance drivers were injured during the war. In addition, 6 ambulances were damaged: 4 ambulances were damaged by shrapnel, (2 were severely damaged and two had minor damage) and 2 ambulances were involved in accidents while transferring casualties.



The Jordanian Field Hospital, in-patient area © WHO oPt M. Halabi.

### 3. Key health system challenges before and during the crisis

#### A. PHARMACEUTICAL SUPPLIES

The main challenge to the health sector before and during the crisis was the availability of drugs and medical supplies; more than 40% of the essential drug items in the essential drug list and more than 50% of medical consumables were out of stock before the crisis.

The shortages of drugs include lifesaving drugs, including those for treating cancer, drugs for treating cardiovascular disease, psychotherapeutics, and kidney dialysis products. Lack of anti-infectives, including life-saving antibiotics, places vulnerable groups such as young children, the elderly and diabetics at particular risk. A lot of people rely on a consistent supply of medication to manage chronic cardiovascular diseases. Interruption of treatment places these patients at risk of complications such as stroke and myocardial infarction. Lack of cancer and dialysis treatments has severe short and long-term mortality implications.

#### **Main reasons for gaps**

The MoH has been suffering from severe shortages in drugs and disposable materials for the past several years. In 2012 drug items at zero stock ranged from 29% to 42.5% of the essential drug list, peaking in May (42.5%) and in October (40%). The zero stock of medical disposable supplies increased steadily during the year from 26.7% in January to the highest point of 65% in October. The following table shows the zero stock from the beginning of the year.

**Table 1. Pharmaceutical supplies at zero stock in MoH Central Drug Store in Gaza, 2012**

Month	Zero stock (of 480 Essential Drugs)	Drugs (%)	Medical Disposables (of 700 items)	Medical Disposables (%)
January	160	33.3	187	26.7
February	186	38.8	200	28.6
March	182	37.9	217	31.0
April	182	37.9	217	31.0
May	204	42.5	211	30.1
June	139	29.0	266	38.0
July	167	34.8	299	42.7
August	167	34.8	319	45.6
September	178	37.1	372	53.1
October	192	40.0	586 (of 902 items)	65.0
November	168	35.0	513 (of 902 items)	56.9
December				

The recent escalation exacerbated pre-existing drug and disposable shortages due to the high demand for pharmaceuticals and consumables to treat the large number of injured persons suffering various kinds of trauma, including fractures and burns, and the large number of surgeries.

### **Coping and response mechanisms**

Hospitals had difficulty coping with the shortages. Some hospitals reported re-use of single use supplies, for example, Nasser hospital in Khanyounis reported the need to re-use endotracheal tubes in the neonatal intensive care unit, the cardiac catheterization team at Gaza European hospital reported re-sterilizing cardiac catheters for re-use, and the oncology department at Shifa hospital reported that chemotherapy protocols for many patients were changed due to the lack of one or more drugs. Doctors at a number of hospitals said they were using alternative and less effective antibiotics when the drug of choice was not available.

In a rapid response to the crisis, the MoH in Ramallah, which has been suffering from financial crisis and has debts of NIS 650 million to pharmaceutical suppliers, was able to ship 200 pallets of drugs and consumables. UNRWA donated through WHO significant quantities of 10 important drug items. UNICEF procured 20 items of needed drugs and disposables and therapeutic milk. Other international organizations donated drugs, medical disposables, and equipment to the MoH. Médecins Sans Frontières procured and delivered narcotics and anesthetic drugs and emergency kits. Médecins du Monde – France donated its pre-existing emergency stock of drugs and disposables to the Central Drug Store in Gaza. Medical Aid for Palestine – UK procured 24 drug items to cover part of the zero drug stock of the MoH. The UNFPA responded by procuring 36 drug items and 17 medical disposables. The Arab Medical Union delivered 15 tons of IV fluids in addition to different amounts of drugs, consumables

and materials needed for hemodialysis. ICRC maintained regular supply to the MoH hospitals with 115 medical disposable items, especially those needed for orthopedic surgery. ICRC maintained regular supply to the MoH hospitals with 115 pallets of medical disposable items, especially those needed for orthopedic surgery. In addition, the ICRC coordinated and transported 199 pallets of drugs and disposables from MoH Ramallah to the MoH in Gaza on November 18, provided dressing material, anaesthetics and hospital drugs, provided 1 MT of medical supplies for treating wounded to Al Awdeh NGO and first aid supplies to PRCS Al Quds hospitals, and coordinated the liaison of transport of wounded when required with the authorities concerned, among other emergency humanitarian aid. Save the Children International procured 99 drug items and 16 medical disposable items for the NGO sector.

In a response to the WHO oPt appeal, the charity foundation Mercy Relief based in Singapore donated \$20,000 for urgently needed laboratory supplies and essential medicines. The most recent donation, from Norway, was made on December 5, 2012, by the Minister Counselor from the Representative Office of Norway who signed an agreement for a donation of \$600,000 to WHO oPt.

## **B. MEDICAL EQUIPMENT AND MAINTENANCE**

According to a list provided by the MoH's Central Maintenance Unit (updated on November 28), more than 200 spare parts are needed for repair or scheduled maintenance of medical equipment over the next six months, with a total value of \$590,000.

No medical equipment was damaged in the recent war; however, the prolonged shortage of spare parts continues to be a significant problem. Of the five CT machines in Gaza, three are awaiting spare parts. There is only one functioning MRI in the Gaza Strip. One CT machine malfunctioned during the war but the ICRC was able to provide the spare part from Ramallah the next day.

Since medical equipment --- whether from donations or procured by the MoH --- is often from multiple manufacturers, such as ventilators (eight brands) or ECG machines (four brands), maintenance, supply of spare parts and training is complicated and costly. Patient care can suffer since medical staff members are constantly switching between different equipment which raises risk of medical errors and decreases patient's safety. A list of preferred medical equipment specifications and brands may be a useful guide for donors.

Although Israel eased the blockade in June 2010, there are still restrictions on construction materials, and some equipment is categorized as 'dual use' and needs special security approval. WHO coordinates with Israel to ensure the transport of spare parts into Gaza.

Large capacity generators are needed to protect the hospitals from power cuts and to ensure round-the-block electricity. Currently, when a hospital experiences power cuts of up to 8 hours, generators are used for patient care and power is cut in service areas, such as the laundry and air-conditioning. There is also an urgent need for renovation of the plumbing in the surgical scrub room in Shifa hospital to ensure a reliable supply of clean water.

### C. HUMAN RESOURCES<sup>1</sup>

On the second day of the crisis, the Ministry of Health in Gaza called all of its employees to report to work at the health facility nearest to their residence. Work hours were adjusted to either 12 or 24 hours on duty to minimize the risk of transportation during air strikes and maximize the availability of staff in the hospital.

Only 12 of 1,539 physicians were unable to report to their original working station and were deployed to Shifa. While the total number of physicians in governmental hospitals was adequate to deal with the emergency, the MoH appealed to the Arab and international community for specialist physicians to support the efforts of the local staff. MoH received delegations from the Arab region, e.g., the Arab Medical Union, Egyptian Medical Syndicate, Sudan, Tunis, Morocco, Libya and also from Norway. These delegations included surgical specialists in neurology, cardiology, orthopedics, ophthalmology, plastics, and ENT, and anesthesiologists and intensive care specialists.

**Table 2. Health services personnel in the Gaza Strip**

Profession	MoH	UNRWA	Military	NGOs	Total
<b>Physicians</b>					
Supervisory position	214	0	0	0	<b>213</b>
GPs	847	149	76	257	<b>1,329</b>
Specialists	661	16	68	500	<b>1,245</b>
Dentists	107	35	24	111	<b>277</b>
Pharmacists	342	74	56	131	<b>603</b>
<b>Nurses</b>					
Supervisory position	258	0	0	0	<b>258</b>
Nurses and midwives	1,967	351	141	541	<b>3,000</b>
Paramedicals; technicians	774	70	121	268	<b>1,233</b>
Administration	1,826	93	189	311	<b>2,419</b>
Others	1,446	158	0	225	<b>1,829</b>
<b>Total</b>	<b>8,441</b>	<b>946</b>	<b>675</b>	<b>2,344</b>	<b>12,406</b>

<sup>1</sup> Key informants: Dr. Methqal Hasouna , MOH; Mr Hani Al Wehidi, MOH; Ms Suhiela Tarazi, Ahli Hospital; Dr. Mohamed Al Kashif, MOH; Mr Tayseer al Sultan; Al Awdah hospital; Mr. Murad Bader, Al Karama Hospital; Mr Abu Sami Al Ghalban, Al Salam hospital.

In the northern area, the MoH Kamal Adwan hospital, whose operating rooms were being renovated at the time, mobilized its surgical teams to the NGO hospital al Awda to perform surgeries.

The nursing department estimated that 5-30% of the nursing staff did not report to duty due to the security situation. A large number of nurses were assigned to the emergency department, operation rooms and intensive care units. There was a deployment of the nursing staff from closed PHC clinics in the northern area to Kamal Adwan Hospital in the north, according to their experience in the intensive care unit or documenting emergencies. Although the total number of nurses reporting to work was sufficient, hospitals also benefitted from volunteers and internship nurses where they were allocated to non-emergency areas of the hospitals.

The human resource challenges faced by the MoH during the conflict, as reported by the hospital directorate, were:

- the number and quality of specialized nurses, such as intensive care and operating room nurses, had been inadequate;
- securing safe transportation for staff, in particular nurses, was problematic;
- nursing staff required capacity building in trauma management.

All NGO hospitals reported that 90-95% of their staff reported to work despite the security situation. Some of the hospitals used hospital vehicles to provide their staff safe transportation. Some staff remained on duty for 24-hour periods, primarily physicians, with extra staff assigned for night duty in case of escalation of attacks.

UNRWA was unable to provide transportation to staff, therefore PHC clinics relied on staff who had safe access to facilities.

#### **D. HEALTH INFORMATION**

The two main bodies responsible for facility-based and population-based health information are the Palestinian Health Information Center (PHIC) under the Ministry of Health, and the Palestinian Central Bureau of Statistics (PCBS). Data quality and availability were affected by the staff turnover that followed the political split between the West Bank and Gaza. Currently, the PHIC in Gaza consists of two departments with 23 employees, and is located in an unsuitable building without adequate communication facilities; it has been unable to produce and disseminate reliable health data since 2008. The information technology (IT) component for health information is managed separately by the IT department.

During the Gaza crisis, the PHIC produced a daily report on death and injuries, disaggregating the data by age and gender, although not fully. After the crisis ended, the PHIC, with the support of WHO, was able to conduct an in-depth analysis of casualties, using more reliable data.

## 4. Baseline health status

Gaza has a population of 1.65 million (38.2% of the total oPt. population), more than two-thirds of whom are refugees (1.1 million). At the end of 2011, 43.8% of the population in Gaza was 0-14 years of age (compared to 38.6% in the West Bank), while the percentage of those aged 65 years old and above was 2.3%. Life expectancy for individuals in Gaza is 71.8 years (70.2 males and 72.9 females), lower than the life expectancy for the oPt as a whole (70.8 males, 73.6 females).

Gaza has relatively low infant and under-five mortality rates. The infant mortality rate in 2010 was 22.4, and the mortality rate under five years of age was 27.7. Infant deaths are concentrated within the neonatal period, and many neonatal deaths occur within the first week of life. The neonatal mortality rate in Gaza Strip can still be substantially reduced and a high proportion of early neonatal deaths --- and of poor outcomes from complications --- avoided by improved quality of perinatal care. The main causes of neonatal mortality are asphyxia, infections and low birth weights. The main causes of maternal deaths are hemorrhage during and after delivery, infections, eclampsia, anaemia and obstructed labor.

In 2005, the leading causes of death in the occupied Palestinian territory (oPt) among all age groups were similar to those of mid- and high-income countries: cardiovascular diseases (38.2%), perinatal conditions (9.7%), cancer (9%) and accidents (8.9%).

Acute malnutrition (wasting) among under-five children in the Gaza Strip in 2010 is still relatively low with 3.8% reported as suffering from wasting and 6.9% in the North Gaza governorate. The rate has, however, increased since 2000, when wasting was 1.4%, and could reach the threshold of a mild public health problem (5% of population, according to WHO standards). In addition, there has been an increase in underweight among under-five children, from 2.4% in 2006 to 3.5% in 2010. 9.9% of children under five suffer from chronic malnutrition (stunting), which can be viewed as a mild public health problem. According to 2010 data, 25.6% of children aged 6-59 months in the Gaza Strip were found to be anemic, with the prevalence reaching 41.4% in some governorates.

The fertility rate in the oPt has declined somewhat in recent years but remains high, and significantly higher in Gaza than in the West Bank, 4.9 to 2.6 respectively. The great majority (99.3%) of pregnant women aged 15-49 in the Gaza Strip reported receiving ante-natal health care (minimum of 4 visits) from qualified personnel during their last pregnancy. Despite the high rate of ante-natal care and a food supplementation program, more than one third (39.1%) of pregnant woman in the Gaza Strip are anemic. Of total births, 98.4% were reported as deliveries at health facilities.

In 2010, 16.1% of the population in the Gaza Strip aged 18 years and above was reported to be suffering from at least one chronic disease, a large increase over the figure in 2000 of 11.5% with at least one chronic disease. Moreover, 68.8% of elderly aged 60 and over in Gaza suffered from at least one chronic disease in 2010, substantially higher than the 2000 figure for the oPt of 46.5%.

**Table3. Selected health indicators and trends in Gaza**

	2000	2006	2010
<b>Total population size: oPt</b>	3,150,056	3,888,292	4,231,084
<i>Gaza</i>	<b>36.13%</b>	<b>37%</b>	<b>38.2</b>
<b>Refugee population: oPt</b>	1,428,891	1,705,131	1,865,764
<i>Gaza</i>	<b>833,043</b>	<b>996,232</b>	<b>1,088,910</b>
<b>Life expectancy at birth: oPt</b>	71.8	71.7 M, 73.2 F	70.8 M, 73.6 F
<i>Gaza</i>	<b>70.4</b>	NA	<b>70.2 M, 72.9 F</b>
<b>Total Fertility Rate: oPt</b>	5.9	4.6	4.1
<i>Gaza</i>	<b>6.8</b>	<b>5.4</b>	<b>4.9</b>
<b>Crude Death Rate: oPt</b>	4.5	4.0	4.1
<i>Gaza</i>	<b>4.3</b>	<b>3.9</b>	<b>4.0</b>
<b>Infant Mortality Rate: oPt</b>	25.5	27.6	20.0
<i>Gaza</i>	<b>27.3</b>	<b>30.7</b>	<b>22.4</b>
<b>Under-five Mortality Rate: oPt</b>	28.7	31.6	24.0
<i>Gaza</i>	<b>31.2</b>	<b>34.9</b>	<b>27.7</b>

## 5. Functionality of health delivery system during the hostilities

### A. PRIMARY HEALTH CARE

MoH and UNRWA PHC centers provided emergency and regular medical services during the crisis. In the MoH PHC, most health personnel were redeployed to work at the nearest PHC to their home and a limited number of personnel did not report to duty due to restrictions of movement in their areas. Only six PHC staff were redeployed; they were assigned to work at Kamal Adwan hospital in the North area. Only nine of 54 MoH PHCs did not function during the crisis due to either security conditions around the center or direct damage to the infrastructure.

**Table4. PHC centers not functioning during the crisis**

Governorate	Name of the clinic
<b>North Gaza</b>	Jabalia, Atatra and Shayma
<b>Gaza</b>	Sourani, Hala Shawa, Sabha Harazine and Center for Physically Disabled
<b>Mid Zone</b>	Juhreddiek
<b>Khan Younis</b>	Khan Younis main center (moved to a safer location and provided services for its clients)

The remaining PHC centers provided emergency and regular clinical services to clients, including treatment of acute conditions and follow-up visits for chronic patients. The technical staff attendance varied from 75% in the Gaza area and 80% in North Gaza to 100% in the Middle and South. The number of service users was considerably reduced; 30% attendance for vaccinations, 10% for ante-natal care and 30% for chronic illnesses. However, activities of the departments of the medical commission, school health, central public health laboratories, environmental health, health awareness-raising activities and home visits were suspended.

19 of 21 UNRWA health centers were working during the war with full duty till 1.45 PM, followed by emergency teams composed of two staff until 4.00 PM. The Ma'an and Shoka health centers which were located in a high-risk area were inaccessible to the staff. Four health centers suffered indirect and partial damage to their infrastructure from shelling: El Naser and Shoka centers in Rafah, the Japanese center in Khan Younis and Jabalia center in the North. Total staff attendance ranged from 75% to 80%, and the average attendance rate by beneficiaries was approximately 50-55% of normal.

## **B. SECONDARY AND TERTIARY HEALTH CARE**

The MoH declared an emergency situation in the evening of 14/11/2012 and ended it on 22/11/2012. Accordingly, the MoH closed the outpatient clinics in its hospitals, cancelled scheduled surgeries and cancelled vacations of all employees. Shifts were adjusted to 12 hour or 24 hour shifts, depending on availability of medical staff. More than 90% of the MoH employees reported to their work place during the war; those who lived far from their work place and female employees had more difficulty with access. Hospital administration officials said that all doctors reported to their work place since most lived nearby or had private cars. 5% to 30% of nurses failed to report to their work.

The PRCS, military medical services, and EMS ambulances transferred injured people from casualty sites to the hospitals, but injured persons also arrived by private car. The majority of the casualties were brought to MoH hospitals although NGO hospitals received some. For instance, the PRCS hospital Alquds received 20 injured people. Al Awda hospital in the north offered its operation room for surgeries for injured people transferred from the MoH hospital Kamal Adwan, where the emergency room was undergoing renovation.

Non-war related urgent surgeries such as appendicitis were referred to NGO hospitals to decrease the load on the main hospitals; these included Al Awda and Balsam hospitals in the north, and Public Aid Society, Al Quds, and Patient Friends Society hospitals in Gaza.

The main MoH hospital, Shifa, received 687 (43%) of war-related casualties, Kamal Adwan hospital received 410 (26%), Shuhada Al Aqsa hospital 168(10.5%) and Al Najjar hospital 120 (7.5%). The rest were dispersed among various hospitals.

The occupancy rate in MoH hospitals did not exceed 80% during the 8-day crisis. 37 severely injured persons were transferred to Egypt; most of these patients needed intensive care.

Medical teams arrived from outside Gaza to support the health system and to treat injured people and brought medical equipment, drugs and consumables needed for traumatic injuries.

The MoH in Ramallah facilitated the sending of a delegation of 14 surgeons from the West Bank to Gaza. Four Egyptian surgeons who were visiting Gaza before the war were replaced by a new group of four physicians in the first few days of war. Other medical delegations that came to support the MoH hospitals were: 10 surgeons from Sudan, 10 from Libya, 6 from Yemen, 3 from Turkey, and 3 from Morocco. A Tunisian delegation arrived post war, and Morocco erected a field hospital beside Al Quds hospital. A delegation from Jordan of 7 surgeons was expected to arrive in early December.

Some shortages of fuel were reported in the hospitals during the crisis. The electricity cut offs were short and the amount of fuel remained enough for 5-7 days.

### **Referral out of Gaza through Erez crossing during the crisis**

178 applications for permits to cross Erez had been submitted by patients prior to the war for hospital appointments from November 15 to 21. Of these applications, 62 were approved permits, 38 to West Bank including East Jerusalem hospitals, and 24 to Israeli hospitals. Only 47 of these patients actually crossed Erez: 25 to Palestinian hospitals in the West Bank and 22 to Israeli hospitals. This included one war-related injury (girl with amputated fingers) by special arrangement between Tel Hashomer hospital and the Peres Center for Peace. A second casualty, a young woman with serious multiple injuries, was transferred to Makassed hospital on November 22, the first day of the ceasefire.

### **C. REPRODUCTIVE HEALTH<sup>2</sup>**

In general, there was a decline in the functioning of ante natal and post natal services at PHC – MoH and UNRWA during the emergency. Post natal home visit care at PHC- MoH was stopped altogether, however all maternity hospitals were fully functional with all related services. There were 6 reported cases delivered at home, 3 of them with a skilled birth attendant, and one baby was transferred to Nasr Pediatric hospital for neonatal care. The length of hospital stay was longer for women delivering at night. Tel Al Sultan maternity hospital indicated that there was an increase in the number of preterm labor during the week of the emergency compared to the week before and after, which requires further investigation. Neonatal ICUs were functioning well during the crisis. Tel al Sultan hospital and European Gaza hospital managed the increased bed occupancy without problems. The breastfeeding rate for admitted babies was decreased due to difficulty for mothers to reach hospitals to breastfeed their babies.

UNFPA had supported the establishment of maternity hospital “Harazine” east of Gaza and equipped 11 emergency obstetric hubs in peripheral areas in all Gaza Strip governorates as a

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<sup>2</sup> Key informants: MCHN technical coordination team in Gaza (UNFPA, UNICEF, UNRWA MDM – France, MAP-UK, and WHO); Dr Munther Ghazal, Visa Al Za'aneen, Sana Abu Samra, Attal al Jazar ,Dr Naeem Ayoub, Layla al Masharfa, Dr Abdulkareem Al Bawab, N. Ain Al Haya, Ruhaiifa al Fara, Maged Hasanein, Faten Shaqra, Ward Abu Ghraba, Dr. Nabeel al Baraquani, Hanan Al Wadeya, and Wesam Shaltout.

response to the 2009 war. The hubs' main task is managing low-risk normal deliveries and referrals to maternity hospitals for high-risk cases. During this emergency, only two cases reported to these hubs and were referred to the nearest hospitals in the area.

NGO maternity hospitals managed only low-risk cases during the emergency and referred high-risk cases to Shifa and Nasser medical complexes.

## **D. MENTAL HEALTH**

### **Mental health services during the crisis**

Mental health services in the Gaza Strip are provided through one psychiatric hospital and six community mental health centers distributed in the five districts. During the eight days of crisis in Gaza, three community mental health centers were completely closed due to the unsafe security situation, two of which were partially damaged due to the targeting nearby places: West Gaza and Surani community centers. The other three community centers were open to the public during the 8 days of crisis but received only 25% of their average caseload.

The only psychiatric hospital in Gaza had reduced the number of beds to 24 over the past two years. Of their current regular hospital staff (8 psychiatrists, 35 nurses, 22 psychologists and social workers), only 50% were able to report to work during the eight days of crisis due to the unsafe security situation. Therefore, the hospital discharged all in-patients in order to work as an emergency station due to the reduced staffing and the closure of the two community mental health centers in Gaza city.

### **Emergency teams**

Five multidisciplinary emergency teams were formed in line with the emergency plan that was prepared by the mental health steering committee. Those teams were distributed in four general hospitals along the Gaza strip. Two teams in Shifa hospital, one team in Shuhada Al Aqsa hospital, one team in Nasser hospital and one team in Abu Yousef Al Najjar hospital. Those teams provided psychological first aid for injured people and their families in general hospitals, in addition to providing outreach intervention to most affected families when the security situation would allow.

The number of cases who received psychosocial intervention by the emergency teams during the eight days of crisis in indicated below, by district:

<b>District</b>	<b>Number of outreach cases</b>
North Gaza	10
Gaza city	80
Middle area	5
Khan Younis	57
Rafah	24

The main gaps in mental health services were:

- Emergency teams were not able to provide initial support to affected families because of the lack of secure transportation.
- 24 items of psychotropic medications were out of stock during the eight days of crisis.

UNRWA coordinated activities with the MoH and had UNRWA counselors distributed to provide psychosocial intervention to the displaced in shelters. Other NGOs could not send counselors to the field because of the unsafe security situation.

### **Mental health needs**

The high number of airstrikes on Gaza during the 8-day period can be expected to result in high levels of mental stress for the population including mood, anxiety and psychosomatic problems. The initial acute symptoms are likely to disappear over time for more than 90-95% of the affected population if sufficient protective factors are present in their environment and if emergency-related stresses resolve.<sup>3</sup> However, a relatively small percentage will continue to experience severe emotional and mental distress; these effects may impair their functioning for months, even after a protective environment has been restored. WHO projects that the long-term effects of emergencies increase the number of people with severe mental disorders by an average of 1% above the baseline and those with mild and moderate mental disorders by an average of 5-10%. This population group requires more specialized and on-going interventions, e.g. through community mental health services.

On a conservative estimate, it is reasonable to assume that 25,000 to 50,000 people will need some form of psychological intervention to address the long-term effects of this crisis. Some groups are more at risk of severe emotional distress than others, e.g. children and adolescents, separated children, people with pre-existing neurological or mental disabilities, people with pre-existing or new physical disabilities, elderly people who have lost family member support, and women-headed households.

To promote resilience and prevent long-term effects, and at the same time provide appropriate mental health care to those in need, three levels of interventions are necessary: 1) Political action restoring normal socioeconomic and security life conditions; 2) psychosocial actions promoting protective factors; 3) interventions strengthening the health care system, to guarantee appropriate mental health care.

The implementation of the national mental health emergency plan was crucial in providing accessibility to mental health services in key general hospitals in Gaza Strip. Furthermore, the MoH mental health teams will keep providing specialized services as a referral source for

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<sup>3</sup> Guidelines on mental health and psychosocial support in emergency settings. Inter-Agency Standing Committee (IASC), 2007.

NGOs working in the field, supervision for NGO workers and support for PHC efforts in providing mental health services at local level, including psychological first aid.

## **E. COORDINATION**

The parties involved in coordinating the response activities were the Ministry of Health as the main authority and provider of care, WHO as the health cluster lead, and other organizations involved in the management of emergency response such as ICRC and the PRCS. The MoH declared an emergency in the health sector immediately after the eruption of hostilities. They formed a crisis management team which worked around the clock and based in Shifa hospital in Gaza city. WHO, as the health cluster lead agency, coordinated with the MoH and the international community. Bilateral coordination occurred through daily visits to the MoH emergency command and control room at Shifa hospital and daily contact with key stakeholders, including the Civil Liaison Administration (CLA) of the Israeli military authorities. WHO also held coordination meetings for the health sector and the mental health and psychosocial sub-cluster (co-chaired with UNICEF) to align responses and share information.

## **F. DETAILS OF THE INJURIES**

The Palestinian MoH reported 182 fatalities (158 males and 24 females) during the eight days of hostilities: 47 (26%) children, including 16 under 5 years old, 12 women and 20 adults above 60 years old. Most of the fatalities (87.9%) had multiple injuries. The MoH also reported 1399 injuries, 28% female and 37% (516) children, one third of whom were under 5 years old.

The lists of fatalities and injured, including name, age and residence, were made available by the Palestinian Health Information Center (PHIC) to WHO and other interested parties.

- 54% (758) were injured while they were at home, 16% while walking in the street, 1% while at work and 28% unspecified.
- The geographic distribution of injuries shows that 45% happened in Gaza City, 29% in North Gaza, 9% in each of Middle-zone and Khanyounis, and 7% in Rafah.
- 28.3% of injuries were at the head and neck, 19% in more than one location of the body, 17% in the abdomen and pelvis, 13% in the upper limbs and 13% were superficial wounds.
- 483 casualties had to undergo surgical operations, 65 had to be admitted to Intensive Care Unit (ICU), 42 were referred to Egypt, 4 to Tunisia and 3 to Turkey for advance treatment. Eight cases had surgical amputation of one limb.
- 10.4% were categorized as severe that required more than one surgical operation and/or admission to Intensive Care Unit (ICU) in the course of treatment, 22.4% were moderate, required hospitalization and one surgical intervention, and 67.2% suffered slight injuries and have been discharged after treatment at Emergency Room.

## G. KEY CHALLENGES AND PRIORITIES

Considering the already difficult health and socioeconomic situation of the population in Gaza prior to the November crisis, the assessment highlights the following:

- The overall health system and structure in Gaza suffers from serious problems. There is a chronic lack of essential drugs and supplies. Coordination and oversight of the health system is weak and inadequate for dealing with a large scale of emergency.
- The ongoing blockade and siege and internal Palestinian political division has resulted in degradation of the quality of care and of the health sector in general. Coordinating the entry of 'dual use' equipment is a time-consuming process. Entry of construction materials is not allowed and subject to an international agency request for specific projects. Access to health care for patients and movement of health providers into and out of the Gaza Strip is restricted. Training of health staff is not sufficient to bridge the accumulated gap of knowledge and practice during the last decade.
- Power supply in the Gaza strip is inadequate. Lack of financial resources to ensure fuel supplies to both the power plant and the backup generators in hospitals continues to be a major problem. This has a direct result on health care services which are dependent on continuous power for medical devices.
- The political situation in the oPt continues to affect the availability of staff at health facilities. There are still many doctors, nurses and support staff who are not working although they are still being paid by the Palestinian Authority.
- Psychological trauma, lack of personal security and abuse of human rights continue to affect the general population. The trauma and insecurities are cumulative, and are added to the already significant burden from the 2009 war.

Drugs and disposables are the most urgent need –replenish depleted stocks and to provide a reliable on-going supply. The Palestinian MoH needs a monthly average of about 2.5 million USD to cover the costs of drugs needed by the public health facilities in Gaza. The PA is facing a substantial budgetary deficit in 2012 and is heavily in debt to the private sector including medical suppliers. As a result, there are also growing shortages of drugs and disposables in the West Bank. The decision by Israel to withhold tax revenues to the PA will compound their financial difficulties. There appears to be little prospect of this situation improving any time soon – and hence of the PA resuming the delivery of supplies to Gaza to re-stock the system and meet current needs. Support from donors to meet these needs appears to be necessary in the short to medium term.

WHO oPt

20 December 2012