



Quarterly Epidemiological Report-Gaza

Epidemiological Bulletin

From 1 April to 30 June 2014

Gaza Strip in Numbers:

The Palestinian territories consist of two geographically separated areas West Bank (WB) and Gaza Strip. Gaza strip is a narrow zone of land bounded of the south by Egypt, on the west by the Mediterranean Sea, and on the east and north by the occupied territories in 1948. Gaza strip is very crowded place with 46 kilometers long and 5 –12 kilometers wide and with a total area of 365 sq km constituting about 1.35% from the historical Palestine. Gaza strip is administratively divided into five governorates: North, Gaza, Mid-zone, Khan-Younes and Rafah. It consists of four cities, fourteen villages and eight refugees' camps.

- * Gaza Strip has a mid-year population of 1.644.289 people (PCBS, 2012).
- * Male/Female ratio in general population is 103.100 (PHIC, 2012).
- * Population density is 4583 inhabitants per sq km.
- * Population growth rate is very high of over 3.5%.
- * Population under the age of 15 is 45.7%.
- * Infant Mortality Rate is 17.8 per 1000 live births.
- * Crude Birth Rate is 34.4/1000.
- * Crude Death Rate is 3.3/1000.
- * Average life expectancy is 70.7 years for males and 73.5 years for females.
- * Fertility rate is 6.3%.
- * Family size Average is 6.1.
- * Median age (years) is 17.6

Devastating Attack on Gaza, 2014 “How we can forget”

During preparation of this bulletin, Israeli military operation launched on 8 July on the Gaza Strip. What happened in Gaza exceeded all expectations and was beyond imagination. In 51 days of attack more than 2.130 Palestinians have been killed (most of them civilians), more than 11.220 people were injured and large areas of Gaza had been razed to the ground.

One of the impacts of this attack on Gaza was on the health system which was already in a dire situation. The destruction of vital health infrastructure were and are large contributors to the reduced availability of health services during and after the attack. The situation had been exacerbated due to the high levels of shortages of medicines, medical disposables, extreme hospital fuel shortage, limitations in tertiary care capacity and complicated referral mechanisms for the referral of severe cases abroad. Added to these constrains the destruction, damage and closure of different health facilities during and after the attack resulting in reducing service availability and straining services in functioning facilities. The Ministry of Health and health

Continued on page 6

Highlights of this issue:

Gaza strip in numbers	1
Devastating Attack on Gaza, 2014.....	1
Communicable diseases surveillance system	2
Reports of notifiable communicable diseases	4

In Gaza Strip, we apply a multi-disease approach of communicable disease surveillance, which depends essentially on passive surveillance system from health facilities of different health providers (Primary Health Care Centers, Hospitals and Laboratories), governmental and nongovernmental (MOH, UNRWA, NGOs and private sector). The collected data by this system are routinely analyzed and interpreted to help in making decision for prevention and control of communicable disease and to be part of the monthly, quarterly and annually reports on communicable diseases.

Communicable diseases and their related events in Palestine are divided into three groups according to their epidemiological importance:

Group A diseases: Diseases of this group are of high importance so they must be immediately notified with accuracy due the urgency of investigation and intervention. This group includes Acute Flaccid Paralysis (AFP), Acute Poliomyelitis, HIV/AIDS, Cholera, Diphtheria, Food poisoning, Measles, Rubella, Meningococcal diseases, Hemophilus Influenza B Meningitis (HiB), Rabies, Tetanus and Adverse Events Following Immunization.

Group B diseases: Diseases of this group are of the second highest importance and must be notified within one week. It includes other Bacterial and Viral Meningitis, Brucellosis, Hepatitis (A, B and C), Lishmaniasis, Influenza A H1N1, Malaria, Mumps, Sexual Transmitted Diseases (STD), Shigellosis, Tuberculosis, Salmonellosis, Typhoid and Paratyphoid fever, and Whooping Cough.

Group C diseases: Diseases of this group are of low importance and monthly notification is needed. This group includes Animal Bites, Chicken Pox, Diarrhea, Upper respiratory infection, Ascariasis, Amebiasis, Giardiasis, Strongyloidiasis, Enterobiasis, Trichuriasis, Hymenolepiasis, Toxoplasmosis and Leprosy.

Each issue of Epidemiological Bulletin will include information about the time of notification, number and distribution of cases of notifiable communicable diseases under surveillance system.

Reported notifiable diseases by governorates: April, May and June 2014.

Disease	North	Gaza	Mid-Zone	Khan-Younes	Rafah	Total Q2, 2014	Total 2014	5 Years Average, Q2
Group A diseases								
AFP	0	2	0	0	0	2	5	1.4
AIDS/HIV	0	0	0	0	0	0	1	0
Cholera	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0
Measles	0	0	0	0	0	0	0	0
Meningococcal Disease	9	5	1	4	1	20	41	25.2
HiB Meningitis	0	0	0	0	0	0	0	0
Bacterial Meningitis	26	102	2	441	0	571	677	80
Non Specific Meningitis	76	428	208	698	1	1411	1623	441
Vaccine Adverse Events	0	1	1	0	2	4	6	3.4
Food Poisoning	9	0	0	0	0	9	9	5.8
Rabies	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0	0	0

Reported notifiable diseases by governorates: April, May and June 2014.

Disease	North	Gaza	Mid-Zone	Khan-Younes	Rafah	Total Q2, 2014	Total 2014	5 Years Average, Q2
Group B diseases								
Brucellosis	3	4	6	0	0	13	15	2.6
Hepatitis A	93	66	17	79	11	266	547	149.6
Hepatitis B	15	59	3	11	7	93	184	87.2
Hepatitis C	6	5	0	5	0	16	42	13.8
Lishmaniasis	0	0	0	0	0	0	0	0
Influenza A H1N1	0	0	0	0	0	0	0	0
Malaria	0	0	0	0	0	0	0	0
Mumps	1782	3922	1620	1937	1792	11053	17037	94.4
Whooping Cough	0	0	0	0	0	0	0	0
STD	0	0	0	0	0	0	0	0
Shigellosis	0	3	0	0	0	3	3	0
TB Pulmonary	1	2	1	0	1	5	14	3.6
TB Extrapulmonary	1	0	0	0	0	1	2	2.6
Salmonellosis	0	0	0	0	0	0	0	1.2
Typhoid Fever	1	1	0	32	0	34	57	66.6
Typhus fever (OX19)	4	0	0	37	0	41	84	72.6
Group C diseases								
Animal Bites	6	9	0	10	4	29	99	121.8
Chicken Pox	352	525	454	327	69	1727	2566	1637
Diarrhea <3 years	5899	2959	2633	4779	1703	17973	32872	13891
Diarrhea >3 years	3958	1592	1876	1350	650	9426	18063	7939
Bloody Diarrhea	462	239	642	440	136	1919	3649	1852
Upper respiratory infection	12126	7161	4832	4467	2882	31468	61989	17183
Scabies	0	123	31	0	0	154	227	48.4
Ascariasis	17	11	0	4	2	34	51	51
Amebiasis	486	1239	284	419	292	2720	4357	2474
Giardiasis	161	246	40	126	163	736	1213	899
Enterobiasis	7	0	0	17	3	27	39	13.2
Hymenolepiasis	5	8	0	2	8	23	32	22.2

Epidemiological situation of reported communicable diseases during the second quarter, 2014

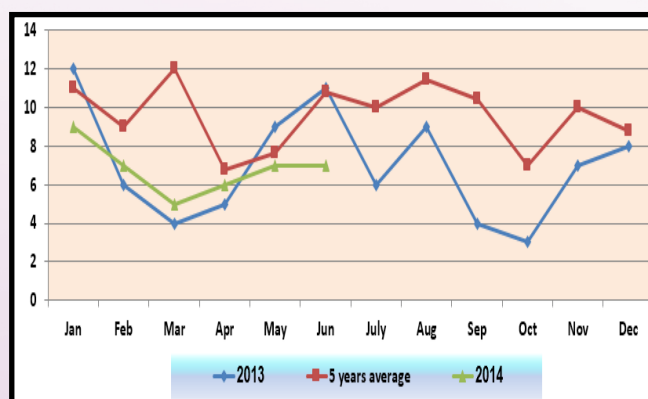
During the second quarter 2014 a total of 84,545 cases of notifiable diseases were reported to the epidemiology department which constitute about 15.5% increase comparing with the previous quarter (73,230 cases). The top three diseases on the reporting form were upper respiratory tract infection (URTI), diarrhea and mumps. These diseases are constituting a total of more than 85% of all notifications. The five years average (during the first quarter) for URTI was low because only influenza cases were reported. Recently, URTI was added to the notification list which explain the high number of notifications. When compared with the average notifications in the preceding five years; non-specific meningitis, bacterial meningitis and mumps showed very high increase (reported as an epidemics); Brucellosis, Hepatitis A and scabies showed about 2 folds increase; and C showed more than 1.5 fold increase; Non-specific Meningitis showed slightly increase. Meningococcal diseases, Extrapulmonary TB typhoid fever, typhus fever and animal bites showed decrease compared with the five years average. During this period, none of the following infections were recorded: acute poliomyelitis, HiB Meningitis, diphtheria, measles, tetanus, cholera and malaria. No changes of reported cases of AFP, Hepatitis B and C, different types of Diarrhea and chicken pox were noticed.

Immediately reported diseases during the second quarter, 2014

Meningococcal Diseases:

The same trend of reporting cases of meningococcal diseases during the second quarter 2014 was noticed where a total of 20 cases were reported compared to the previous quarter (21 cases were reported). Comparing to the five years average and the same quarter 2013, a decrease of reported number was noticed where a total of 25 cases were reported. The majority of reported cases (12) were male with a male:female ratio of 100:66.6. The majority of reported cases (16) were diagnosed as meningococemia constituting about 80% from all cases. For meningococemia cases, 13 cases were diagnosed by skin smear and 2 of them were confirmed by CSF culture. For meningococcal meningitis, 3 cases were diagnosed by CSF culture and one case was diagnosed by CSF gram stain. Serogrouping of NM was performed for three cases, and all were serogroup B. Among these cases three children (one

Distribution of Meningococcal diseases cases in Gaza strip, years 2013-2014

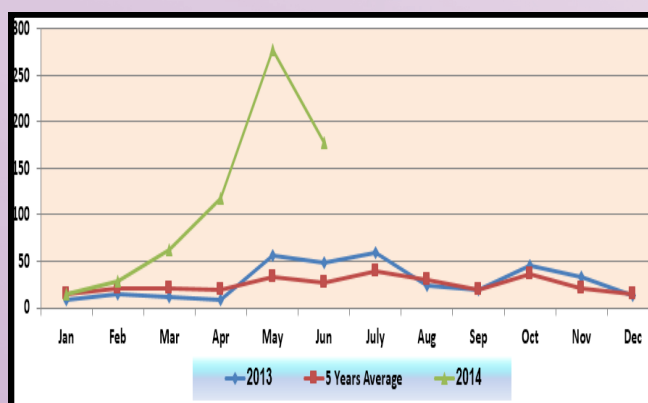


male and two female) with meningococemia were died with an overall case fatality rate of 15%. The majority of cases were reported in North governorate (9 cases) governorate. All contacts were traced and given prophylactic treatment.

Other bacterial Meningitis cases

There was a continuous increase trend of reporting cases of other bacterial meningitis during the previous quarters 2014. During the second quarter, a total of 571 cases were reported comparing with the previous

Distribution of other bacterial Meningitis cases in Gaza strip, years 2013-2014



quarter 2014 where a total of 106 cases were reported. Comparing to the five years average, an increase of reported number was noticed where a total of 80 cases were reported. During the same quarter 2013, a total of 113 cases were reported. The majority of reported cases during this quarter were reported in Khan-Younes and Gaza governorates (a total of 441 (46%) and 102 (18%) cases were reported respectively) Only two cases were reported in Mid-Zone governorate while no cases were reported in Rafah governorate.

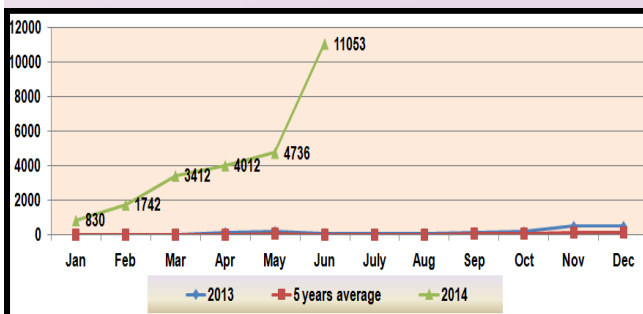
Continued on page 7

Weekly Reported Diseases during the first quarter, 2014

Mumps:

Epidemiology department continues investigation of mumps outbreak that began since the end of April, 2013 in Khan-Younes governorate (Ma'en area) and still increasing till now. During the second quarter 2014, a total of 19801 cases of clinically diagnosed mumps were reported in all Gaza governorates. Comparing with the previous quarter where a total of

Distribution of Mumps cases in Gaza strip, years 2013-2014



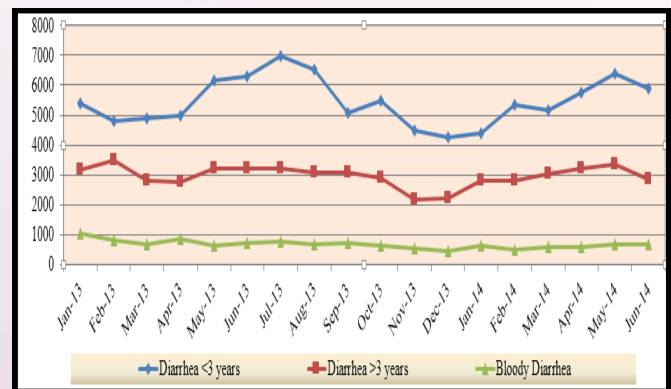
5984 cases were reported constituting a continuous increase for about three fold of reporting cases. During the same quarter 2013, only 417 cases were reported and during the five years average, only 93 cases were reported. During this quarter, the mumps cases were reported from Gaza (3922 cases), Khan-Younes (1937 cases), Rafah (1792 cases), North (1782 cases) and Mid-Zone (1620 cases) governorates.

Monthly Reported Diseases during the first quarter, 2014

Diarrheal diseases:

During the second quarter 2014, the diarrheal disease situation reported an increase comparing with the previous quarter. A total of 29,318 cases of diarrheal diseases were reported during this period, representing about 16% increase comparing with the previous quarter 2013 (25,266 cases). This increase was noticed among all types of diarrhea and the majority of reported cases were reported in North (10,319 cases) and Khan-Younes (6,569 cases) governorates. Comparing to the same quarter 2013, a decrease trend was reported where a total of 27,844 cases were reported.

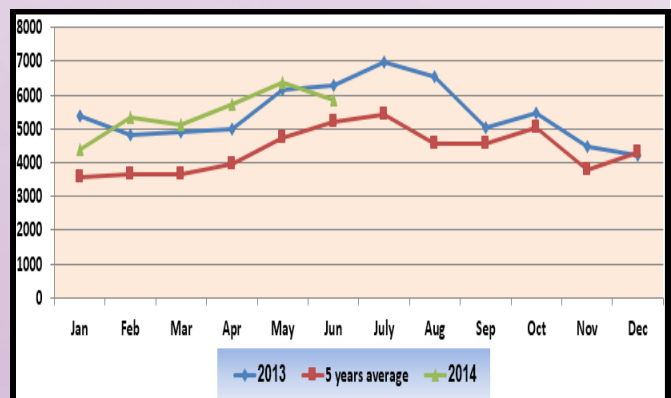
Distribution of all types of diarrheal diseases cases in Gaza strip, years 2013-2014



Diarrhea < 3 years:

There was an increase of reported cases during the second quarter 2014, where a total of 17,973 cases were reported while a total of 14,899 cases were reported during the previous quarter (about 20% in-

Distribution of diarrhea among children less than 3 years in Gaza strip, years 2013-2014



crease). On the other hand during the same quarter 2013, a total of 17,443 cases were reported. Comparing with the five years average, an increase of about 23% of reported cases were reported (13,891 cases). The majority of cases (59%) were reported mainly in North (5,899 cases) and Khan-Younes (4,779 cases) governorates.

Diarrhea > 3 years:

There was an increase of reported cases during the second quarter 2014 where a total of 9,426 cases were reported while a total of 8,637 cases were reported during the previous quarter (about 9% increase). On the other hand during the same quarter 2013, a total of 9,193 cases were reported (about 3% decrease). Comparing with the five years average, a decrease of

Continued on page 7

Devastating Attack on Gaza, 2014

Continued from page 1

facilities staff had to apply numerous coping mechanisms to ensure that service provision continued to meet the most pressing needs and to avoid a total collapse. Despite these challenges, the health system is still effective, efficient, viable and able to maintain continuity of services to all Gazans. The UN and NGOs supported the MoH in the response to the crisis and helped to alleviate the situation during the emergency and in the short term aftermath.



As a result of the continuing attack, thousands of Palestinian civilians have been forced to leave their houses following warnings by the Israeli forces to leave their houses as they would initiate military operations in these areas. This displacement is not a choice but an obligatory fact for all Palestinians as they have been forcibly displaced as their lives have been threatened by the ongoing Israeli attack on Gaza. The United Nations Office for the Coordination of Humanitarian Affairs reported that about 485,000 people had been displaced during the attack, 254,000 of whom were living in about 90 UN Relief and Works Administration (UNRWA) emergency shelters and more than 29,000 found shelter in 23 government schools or other institutions. This means that 25 percent of Gaza's population (about 1.8 million) was displaced within a very small territory. As UNRWA facilities are limited (and many of those are damaged), most of the displaced are likely living with families and friends, squeezing into already-overcrowded flats which had little extra space to begin with.

Three Israeli military attacks carried out on or near three well-marked schools housing displaced people caused numerous civilian casualties in

violation of the laws of war. In the first in-depth documentation of the violations, Human Rights Watch investigated the three attacks, which occurred on July 24 and 30, and August 3, 2014. The attacks resulted in killing of 45 people, including 17 children. Israel has offered no convincing explanation for these attacks on schools where people had gone for protection and the resulting carnage. What UNRWA and the world community have not been able to do is to protect refugees living in the UNRWA areas of operation.

Directly after the end of the attack, MOH with support from WHO implemented an early warning system (E-warn) to monitor 13 communicable diseases on a daily basis as the large scale population displacement with resulting overcrowded living conditions and severe damage to public health infrastructure, including water and



sanitation, significantly increased the likelihood for communicable disease outbreak. Early warning data is being collected at all health facility levels (including hospitals) and in shelters. Since the implementation of the E-warn system, some communicable diseases trend showed an increase trend. The three top communicable diseases reported in terms of number of cases are diarrhea, acute respiratory infections and scabies – all three with increasing trend since the beginning of reporting.

“Killers must be punished”

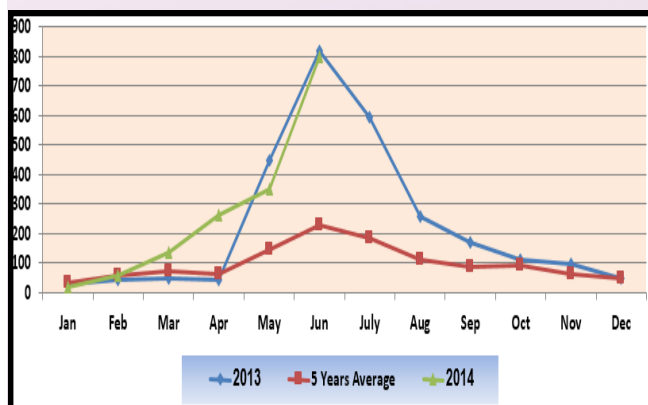
Immediately reported diseases

Continued from page 4

Non Specific Meningitis cases:

There was a continuous increase of reported cases of non-specific meningitis cases during the second and first quarters 2014. During the second quarter, a total

Distribution of non-specific Meningitis cases in Gaza strip, years 2013-2014



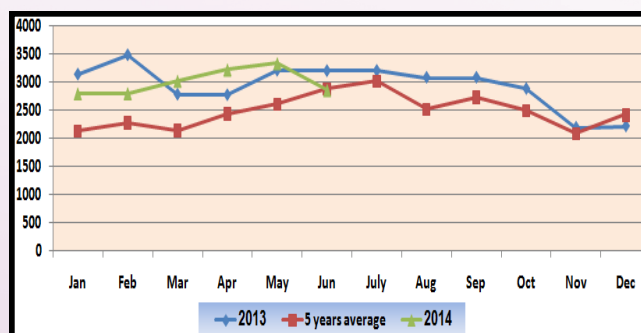
of 1411 cases of NSM were reported while a total of 212 cases were reported during the previous (first) quarter 2014. Comparing with the same quarter 2014, 1310 cases were reported. Comparing with the five year average (440 cases), there was an increase of the reported number of cases more than 3 folds. The same trend as the previous year was reported and the recurrence of the outbreak also. The majority of reported cases were reported mainly in Khan-Younes governorate where about half of the cases (698) were reported. The case fatality rate was zero%. According to the third shipment of samples sent to Norwegian institute of Public Health, the main causative agent identified was enterovirus. There is a strenuous efforts to find the source of infection of this virus .

Monthly Reported Diseases

Continued from page 5

about 16% of reported cases was reported (7.939 cases). The majority of reported cases were reported mainly in North governorate (3958 cases constituting about 42% of all reported cases).

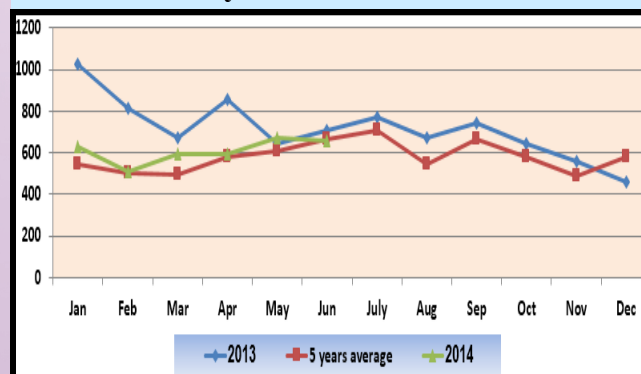
Distribution of diarrhea among children more than 3 years in Gaza strip, years 2013-2014



Bloody Diarrhea:

There was a slightly increase of reported cases during the second quarter 2014 comparing to the previous quarter. During the second quarter 2014, a total of 1.919 cases were reported while a total of 1.730 cases were reported during the previous quarter constituting about 10% increase. Comparing with the five

Distribution of bloody diarrhea in Gaza strip, years 2013-2014



years average, an increase of about 4% of reported cases were reported (1849 cases). The majority of cases (57%) were reported mainly in Mid-Zone (642 cases) and North (462 cases) governorates.

If you want to receive our issues by E-mail, please go to our web sites: <http://www.moh.gov.ps/>; or <http://www.moh.gov.ps/care/>, or forward your E-mail address to our E-mail listed below. Please send any comments and feedback to the Epidemiology Department-Gaza; Email: epidept-phc@moh.gov.ps.

Editorial Board

Dr. Majdi Dheir
ibmajdi@hotmail.com
Dr. Nedal Ghuneim
ghuneimnedal@yahoo.com

Published by:

Epidemiology Department
Al-rimal Martyrs Clinic
Alwehda st.
Palestine-Gaza