

Epidemiological Bulletin



From 1 July to 30 September, 2011

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. 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 population of 1.561.906 people (PCBS, 2010).
- * Male/Female ratio in general population is 103.1.
- * Population density is 4279 inhabitants per sq km. Gaza Strip has an extremely high population growth rate of over 3.3%, and as a result some 44.2% of the population is under the age of 15.
- * Infant Mortality Rate is 17.1 per 1000 live births.
- * Crude Birth Rate is 38.3/1000.
- * Crude Death Rate is 3.1/1000.
- * Average life expectancy is 70.2 years for males and 72.9 years for females.
- * Fertility rate is 5.7%.
- * Family size Average is 5.8.

Dear colleagues:

It is of great pleasure to announce the publication of the first Epidemiological Bulletin of the epidemiological situation of communicable diseases. This bulletin provides a seasonal overview of any important public health events related to communicable diseases oc-

bulletin serves as an essential instrument for the rapid and accurate dissemination of epidemiological information on cases and outbreaks of communicable diseases and other public health events, including the newly emerging or re-emerging diseases.

The bulletin will be published on a quarterly basis. This quarter



curing in Gaza strip. It includes disaggregated data to inform and improve the continuing public health response by the various partners. In the Epidemiological Bulletin we shall discuss in simple terms various topics that are relevant to our work in surveillance and in the control of communicable diseases. The Epidemiological

includes months July, August and September. Temporarily the bulletin is published seasonally then it could be published monthly. This bulletin will be published at Ministry of Health (MOH) and Primary Health Care (PHC) web-sites and will be distributed mainly by E-mails on the last page.

Highlights of this issue:

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Communicable diseases surveillance system:

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, Acute Poliomyelitis, HIV/AIDS, Cholera, Diphtheria, Food poisoning, Measles, Rubella, Meningococcal diseases, Hemophilus Influenza B Meningitis, 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.

Some selected notifiable diseases by governorates, July, August and September 2011.

Disease	North	Gaza	Mid-Zone	Khan-Younes	Rafah	Total 2011	3 Years Average
AFP	0	0	0	1	0	1	2
AIDS/HIV	0	2	0	0	2	4	0
Meningococcal Disease	9	10	3	14	17	53	38
Food poisoning	0	0	0	0	0	0	0
Hepatitis A	17	8	28	50	13	116	170
Hepatitis B	33	25	8	25	9	100	110
Hepatitis C	4	7	2	2	6	21	15
Mumps	2	8	5	2	3	20	34
TB Pulmonary	1	0	0	0	1	2	2
TB Extrapulmonary	0	0	0	0	0	0	3
Diarrhea <3 years	3199	2489	2583	3617	1506	13394	10251
Diarrhea >3 years	1788	1367	2344	1470	1074	8043	5802
Bloody Diarrhea	576	197	763	409	99	2044	1401
Upper Respiratory Tract Infection	4215	1917	2313	2740	580	11765	7408

Reports of notifiable communicable diseases:

Each issue of this Epidemiological Bulletin will contain information about the time of notification, number and distribution of cases of notifiable communicable diseases under surveillance system. All health care providers play an important role in public health efforts to control the spread of disease (especially epidemiology department staff, physicians and laboratory technicians).

All physicians are invited to fill in the notification sheet

Immediately and Weekly Reported Diseases during the third quarter, 2011

Acute Flaccid Paralysis/Acute Poliomyelitis:

During the third quarter 2011 one case of AFP was reported. The Regional Committee for the Eastern Mediterranean Region (EMR) of the World Health Organization (WHO) adopted a resolution to eradicate poliomyelitis from the region by 2015. In Palestine this target has been achieved early in 2006. The last reported case of polio among Palestinian children was in 1984.

Reported HIV/AIDS cases:

Epidemiology department performs counseling and testing services for any patient who is HIV-suspect, positive or AIDS diagnosed. All health care providers are invited to refer all suspects or confirmed HIV/AIDS cases to the epidemiology department. These services will be provided in a completely confidential and professional manner. More information about this subject will be available in the next issues of Epidemiological Bulletin.

Palestine, as all East Mediterranean region countries, reported low incidence rate of HIV/AIDS in the last several years. Unfortunately, two HIV/AIDS cases were reported in July in Rafah governorate and other two cases were reported in September in Gaza governorate. Now in Gaza Strip we have a total of seven HIV/AIDS cases and all of them are under treatment with a prevalence of 0.45/100,000. Till now the incidence rate during this year is 0.68/100,000. Now therapeutic

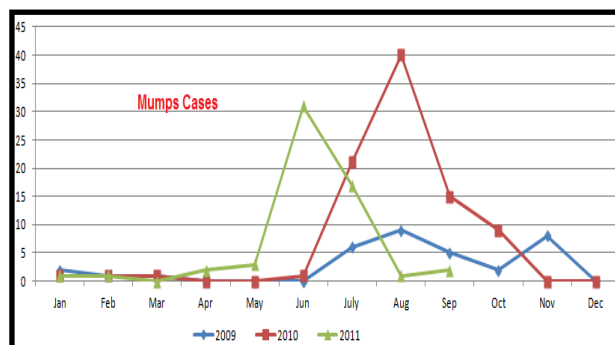
The reason for collection, analysis, interpretation and dissemination of information on a disease is to prevent and control that disease

strategies are focusing on early initiation of antiretroviral regimens in order to improve the quality of life for patients by maximally suppressing viral replication and reducing the development of resistance and preserving immunologic function.

Mumps Cases:

An increase in reported mumps cases has been noticed in Gaza strip since May 2011 and reached the peak on June. In July, 2011 a decrease of reported number of cases was noticed and the incidence was returned to the usual in August. Compared with the previous year 2010, the increase in reported number of cases was noticed from June to August and then it decreased during September and October to the usual incidence. During the period from July to September, 2010

Distribution of Mumps cases in Gaza strip, years 2009-2011



only two cases were confirmed among a total of 76 reported suspected cases. This year since May till August a total of 54 suspected cases were reported mainly in Khan-Younes governorate and some suspected cases were reported in Gaza and Mid-Zone governorates but we don't have the confirmatory test for confirmation. Most cases

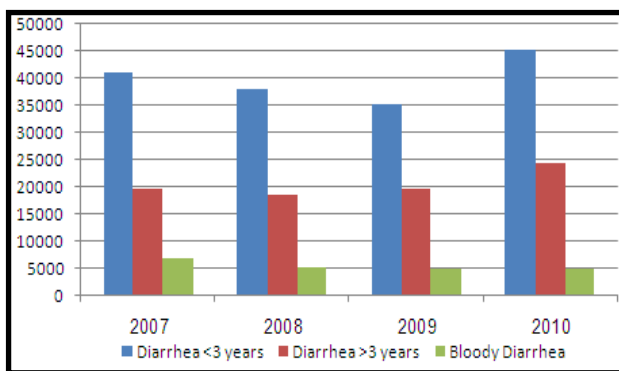
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Monthly Reported Diseases during the third quarter, 2011

Diarrheal diseases:

Diarrhea is a common problem that generally lasts for few days. Diarrhea that lasts for less than one week is called “acute”. In Palestine, acute diarrhea is one of the most common childhood illnesses and the main cause of outpatient visits and hospitalizations. Globally, the average of diarrhea among children under 3 years of age reaches one to three episodes annually and acute diarrhea accounts for almost 10% of all childhood hospital

Distribution of diarrheal diseases in Gaza strip, years 2007-2010

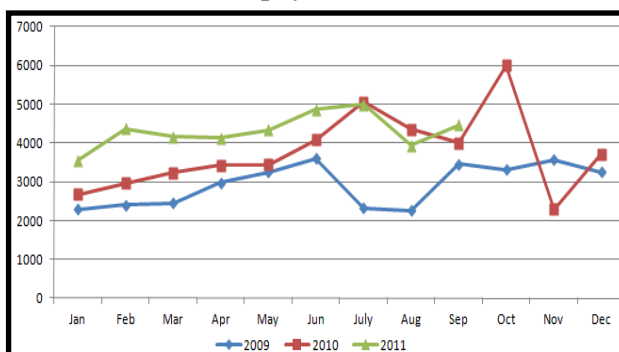


admissions. According to Palestinian surveillance system classification, diarrhea is included in group C diseases and to be notified monthly. It is classified into Diarrhea less than 3 years, Diarrhea more than 3 years and Bloody Diarrhea.

Diarrhea < 3 years:

There is an obvious increasing in the incidence during the first three quarters of the years 2009-2011. In 2009 the incidence was 8.86% increased

Distribution of diarrhea less than 3 years in Gaza strip, years 2009-2011

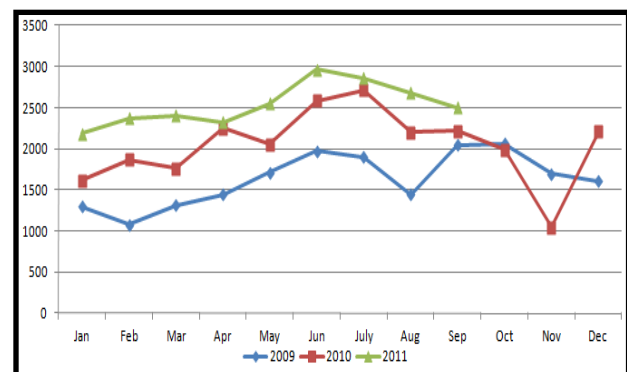


to 13% in 2010 and now it is 15%. The increase of incidence during 2011 could be attributed to the improvement of reporting system since the beginning of this year.

Diarrhea > 3 years:

There is an obvious increasing in incidence during the first three quarters of the years 2009-2011. In 2009 the incidence was 1.2% increased to 1.5% in

Distribution of diarrhea more than 3 years in Gaza strip, years 2009-2011

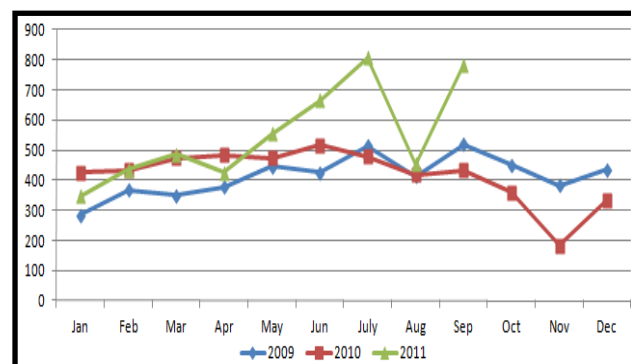


2010 and now it is 1.7%. Once again this increasing in incidence could be attributed to the improvement of reporting system.

Bloody Diarrhea:

Bloody diarrhea is a potentially critical condition in which there is blood mixed with loose watery

Distribution of Bloody diarrhea in Gaza strip, years 2009-2011



stools. There is slightly increase in the incidence of bloody diarrhea during the first three quarters of the years 2009-2011. In 2009 the incidence was 0.18% increased to 0.22% in 2010 and now it is

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Neisseria Meningitidis is a gram-negative diplococci with different serogroups (A, B, C, X, Y, Z and W135). Serogroups A, B, and C can cause outbreaks. Infection could be transmitted from asymptomatic carrier by direct contact with respiratory droplets. Humans are the only natural hosts for meningococci and the organism dies quickly outside the human host. It can not be isolated from environmental surfaces or samples.

Case definition for MM:

Suspected case: Sudden onset of fever (more than 38.5 °C) with neck stiffness, or bulging fontanel in infant under one year of age.

Probable case: Suspected case with turbid CSF or petechial or purpuric rash and Gram stain showing Gram negative Diplococci.

Confirmed case: Suspected or probable case as defined above WITH: positive culture of CSF or blood with *N. Meningitidis*, OR: identification of *N. Meningitidis* Antibodies (Latex test).

A stage of an "alert" for MM:

Two to three-fold increase in cases compared with the same month in previous year in the same area. In areas with population between 30,000 and 100,000: an attack rate of 5 cases per 100,000 inhabitants per week.

Outbreak definition for MM:

An attack rate of 10 cases per 100,000 inhabitants per week.

OR:

5 cases per 100,000 cases per week for 2 consecutive weeks.

OR:

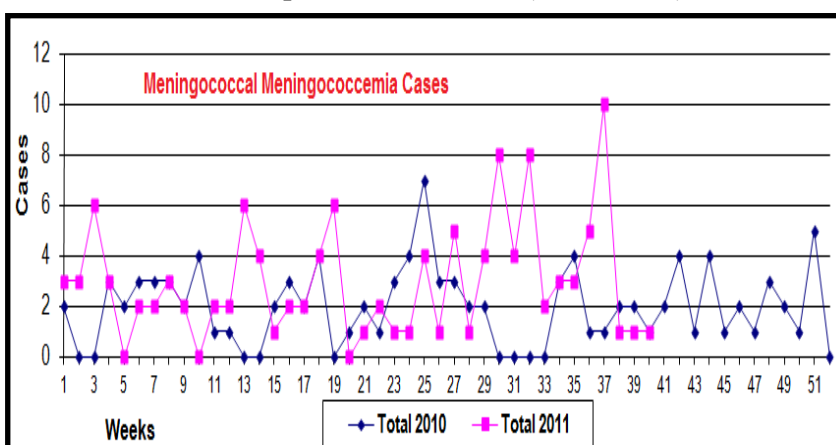
Doubling of cases over a 3 weeks period.

As of weeks 29, 30, 31 and 32 (from 16/07 to 12/08), 2011, the Gaza European Hospital (Ministry of Health-Gaza) had reported a noticeable unusual increase of Meningococcal Meningococemia (MM) cases. A total of 20 cases were reported including 3 deaths. The majority of cases were under the age of 5 years (75%) and were male gender (70%). The average age of affected individuals was 3.2 years, with a range from five months to 10 years. The cases were from Rafah governorate (12 cases) and east region of Khan-Younes governorate (8

Globally, *Neisseria meningitidis* causes Meningitis in about 47.3% of cases and Meningococemia in about 43.3%

Neisseria Meningitidis. Of these cases only one case have been confirmed by culture as B strain serogroup, the majority of CSF results were negative. The ministry of health directly started preventive measures such as early detection, treatment,

Weekly Epidemiological situation of Meningococcal Disease In Gaza Strip, Years 2010-2011 (Weeks 1-39)



cases). Case fatality rate reached 15%. Geographically there was no link between cases. All cases presented with fever and skin rash (even typical or atypical) with positive skin smear for

Case fatality rate in Meningococcal Meningitis is around 10% and in Meningococemia it may exceed 50%

chemoprophylaxis and public health education.

Since the identification of the first meningococcal disease cases in Gaza strip, all reported cases were with B serogroup which have globally no vaccine till now. The available vaccine is against groups A, C, Y and W135 and could not give a protection against B serogroup.

Generally in Gaza Strip since 2008 till 2010, there are a decline in meningococcal disease incidence from 13.6/100.000 to

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Hepatitis B is a disease caused by the hepatitis B virus (HBV), which is transmitted through percutaneous (i.e., puncture through the skin) or mucosal (i.e., direct contact with mucous membranes) exposure to infectious blood or body fluids. For adults, the two primary sources of HBV infection are sexual contact and percutaneous exposure to blood. For infants the main mode of transmission is vertical, where about 90% of infected infants develop chronic Hepatitis B. Hepatitis B vaccines have been shown to be highly effective for preventing hepatitis B and its serious consequences, including liver cirrhosis and hepatocellular cancer (HCC). Currently available hepatitis B vaccines are extremely safe and have an efficacy of >90 percent and are effective against all HBV serotypes and genotypes.

Since 2005 the carriers incidence of HBV among the population is decreasing from 52.7/100.000 in 2005 to 26.5/100.000 in 2010

The overall incidence among blood donors in 2007 was 2.53% then it decreased to 2.29% in 2008 and continued to decrease in 2009 and 2010 to 2.14% and 1.85 respectively. In 2011 and in the following years we expect that this incidence will continue to decrease more and more.

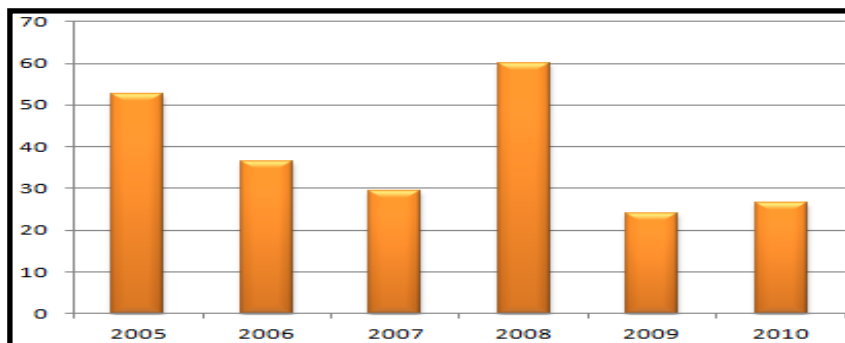
In Gaza Strip, HBV carriers incidence rate is decreasing since 2005 except in 2008 and 2010 years. In 2008 there is an increase in number of reported cases which could be attributed to opening of new epidemiological centers in two governorates (Rafah and North) which reflects improving in the surveillance system. Once again in 2010, slight increase in reported number of cases was noticed especially in Rafah governorate, accordingly, awareness campaign started which included all hair salons and dental and surgical clinics in Rafah governorate as first step. All risky non-vaccinated persons were invited to take a series of the vaccination or to

The incidence of HBV among blood donors is decreasing from 2.53% in 2007 to 1.85% in 2010

program and importance of screening, early detection, follow up of the positive cases, proper management and contact tracing. Hepatitis B vaccine is totally integrated into the national immunization program for children under 1 year of age since 1993 with high coverage rate of about 99%.

A high coverage of the primary vaccine series among infants

Incidence of HBV per 100.000 population in Gaza Strip, Years 2005-2010



complete their vaccine schedules.

According to WHO classification, Palestine, like other countries in Middle East falls in the region of intermediate prevalence rate of Hepatitis B infection. The low incidence and prevalence of HBV is due to the efficiency of vaccination program among infants and other groups at high risk (which is free of charge) in addition to the success of health education

will have the greatest overall impact on the prevalence of chronic HBV infection in children. Descriptive observational study conducted in Gaza strip from July to September 2011. All students attending our departments to get a medical certificate were screened for Hepatitis B surface antigen (18 years post vaccination), anti-HCV and HIV. Initially 426 subjects were

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Mumps cases

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have occurred in individuals less than 10 years old. Although, Gaza population is highly immunized with one dose of MMR vaccine according to Palestinian national immunization program with a coverage of about 99%, since 2008 all children took a second dose of mumps vaccine included in MMR. Two doses of vaccine will provide protection in 90% of vaccine recipients.

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Bloody Diarrhea

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0.24%. Since April 2011 there are increasing incidence of reported cases especially in Khan-Younes, North and Mid-Zone governorates. Generally, bloody diarrhea is most commonly due to an inflammation in the lower gastro-intestinal system caused by bacterial and parasitic infection. This is often linked to contaminated food and water due to bad sanitation and hygiene. The most effective control measures to prevent bloody diarrhea are maximizing access to sanitation, safe water, safe food supplies, and improving personal hygiene practices. So successful health education program and increase health awareness are needed in order to overcome this public health problem. All municipalities of the affecting areas are invited to pay more attention to the sewage system in order to improve it.

***Always Be
prepared to face a
sudden increase
in number of
cases***

Meningococemia

Continued from page 5

6.7/100.000. It could be attributed to good surveillance system and preventive measures. During this period (2008-2010) the majority of reported cases were from the north and Gaza Governorates. This year the incidence increased during the first three quarters to 7.4/100.000 with shifting of reported cases to Rafah and Khan-Younes governorates. The highest weekly attack rate was registered in the weeks 29 and 30 and reached 2/100.000 in Rafah governorate. This increase in rate reaches the alert stage. In Gaza Strip the highest attack rate was in week 37 and reached 0.63/100000. During weeks 38 and 39 the attack rate returned to the normal reported attack rate. Now MOH closely monitors the situation and ready for any emergency.

Hepatitis

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included in the study. 415 (97.4%) subjects were males and 11 (2.6%) were females. Majority of the participants 223 (52.3%) were from Gaza, 76 (17.8%) from North gov., 53 (12.4%) from Rafah gov., 47 (11%) from Mid-zone and 27 (6.3%) from Khan-Younes. Most of subjects were born in 1993, only 19 (4.5%) were born in 1994, which mean that all subjects received hepatitis B vaccine during infancy. All of them were negative for Hepatitis B and HIV. Four (0.94%) Anti-HCV positive results were reported which make us work more seriously to evaluate this situation.

The major limitation of this study was the inability to evaluate the hepatitis B surface antibody (HBsAb) in our study population due to limited resources.

We recommend that MOH should continue the same national policy according to Hepatitis B vaccine. In accordance to Hepatitis C infection, greater awareness is needed in society about the routes of transmission and preventive measures should be improved.

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