Fourth Quarter, 2012 | Quarterly Epidemiological Report-Gaza | Vol. 2, No. 4

Epidemiological Bulletin

From 1 October to 31 December, 2012

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 103.100.
- 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.

AIDS world day

The human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function, making people much more vulnerable to infections and diseases. This susceptibility worsens as the disease progresses. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take 8-10 years for an HIV-infected person to develop AIDS. HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles and from the mother to her infant during pregnancy, childbirth and breastfeeding. In order to raise awareness in the community and to educate everyone about the issues surrounding HIV/AIDS, to encourage progress in HIV/AIDS prevention, treatment and care the World Health Organization established World AIDS Day in 1988. Between 2011-2015, World AIDS Days will have the theme of "Getting to zero: zero new HIV infections, Zero discrimination and Zero AIDS related deaths". The World AIDS Campaign focus on "Zero AIDS related deaths" signifies a push towards greater access to treatment for all; a call for governments to act now. The day brings together people from around the world to raise awareness about HIV/AIDS and demonstrate international solidarity in the face of the pandemic. It is an opportunity for public and private partners to spread awareness about the status of the pandemic and encourage progress in HIV/AIDS prevention, treatment and care in high prevalence countries and around the world. World AIDS Day is one of the most globally recognized events of the year and is a celebration of the achievements that have been made and the acceleration of progress in recent years,

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Highlights of this issue:

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, Hemophillus 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, Trichurasis, 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 reported notifiable diseases by governorates: October, November and December 2012.

Disease	North	Gaza	Mid-Zone	Khan-Younes	Rafah	Total Q4, 2012	Total 2012	5 Years Average, Q4
AFP	0	0	0	1	0	1	9	0.8
AIDS/HIV	0	0	0	1	0	1	1	0.2
Meningococcal Disease	2	8	5	0	1	16	103	30.6
Food poisoning	36	0	0	0	0	36	92	42.2
Hepatitis A	79	66	77	41	67	330	1010	159.8
Hepatitis B	37	30	2	7	6	82	354	94.6
Hepatitis C	9	1	0	4	0	14	71	18.2
Mumps	16	3	2	4	0	25	60	12.6
TB Pulmonary	0	0	0	0	0	0	12	2.6
TB Extrapulmonary	2	0	0	0	0	2	4	2.2
Diarrhea <3 years	5133	2852	2650	4354	1474	16463	64830	10870
Diarrhea >3 years	3989	1299	1979	1774	833	9874	39390	5328
Bloody Diarrhea	1118	228	736	348	148	2578	9384	1320
Upper Respiratory Tract Infection	16191	4658	3828	4763	1870	31310	102286	7748

Epidemiological situation of reported notifiable communicable diseases

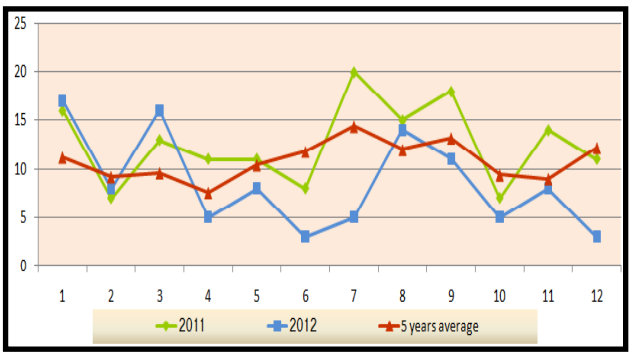
During the fourth quarter 2012 a total of 70.805 cases of notifiable diseases were notified to the epidemiology department which constitute more than 33% increase comparing with the same quarter 2011 (47.141 cases). This increase was mainly related to the increase in the number of cases of upper respiratory tract infection (URTI) and diarrhea. These diseases only were the top two diseases on the reporting form, constituting a total of about 85% of all notifications. The five years average (during the forth quarter) for URTI was very 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, only meningoococcal disease showed more than 50% decrease but hepatitis B, hepatitis C and TB (pulmonary and extra-pulmonary) showed a small decrease. Hepatitis A, mumps and diarrhea showed an obvious increase. During this period, none of the following infection was recorded: acute poliomyelitis, diphtheria, measles, tetanus, pulmonary TB, brucellosis and malaria.

Immediately reported diseases during the fourth quarter, 2012

Meningococcal Diseases:

The situation of meningococcal diseases during the fourth quarter 2012 was improved comparing with the previous quarter 2012 and the same quarter 2011. The number of meningococcal disease cases decreased and following the annual trends. During this quarter, only 16 cases of meningococcal diseases was reported while 32 cases were reported during the same quarter 2011. The majority of reported cases (13) were diagnosed as meningococcemia constituting about 81% from all cases. Among these cases four children with meningococcemia were died with a case fatality rate of 25%. All deaths were children less than 2 years. The majority of cases were reported in Gaza governorate (8 cases constitute about 50% from the total number of reported cases).

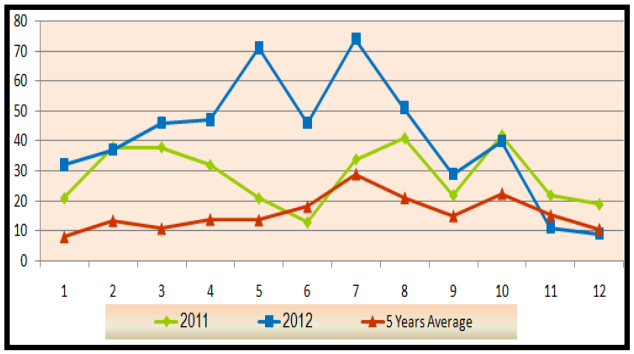
Distribution of Meningococcal diseases in Gaza strip, years 2011-2012



Other bacterial Meningitis cases

The situation of other bacterial meningitis during the fourth quarter was improved comparing to the previous third and second quarters 2012. During October, there was an obvious decrease of reported cases. At the end of this quarter the number of cases decreased below the five years average reported during the same quarter. A total of 60 cases of other bacterial meningitis were reported during this quarter 2012 while a total of 154 and 164 cases were reported during the third and second quarter 2012 respectively. During the same quarter 2011 a total of 83 cases were reported (about 40% more than this year). The majority of cases (31) were reported mainly in Gaza governorates.

Distribution of other bacterial Meningitis cases in Gaza strip, years 2011-2012



Non Specific Meningitis cases:

The reported number of non specific meningitis (NSM) cases continue decreasing during the fourth quarter 2012. During this quarter, a total of 223

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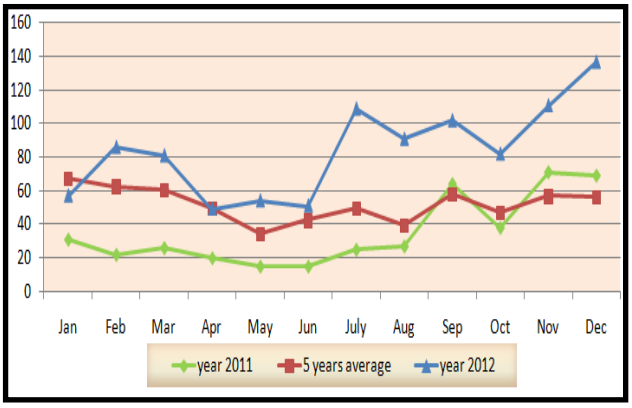
Weekly Reported Diseases during the fourth quarter, 2012

Viral Hepatitis A

Hepatitis A is an endemic disease in many parts of the world including Palestine where it represents the majority of acute hepatitis notified cases during childhood period. It has been observed that about 77% of all reported hepatitis cases were due to hepatitis A.

During the fourth quarter 2012, there was a continuous increase of reported cases of hepatitis A after the registered increase in the previous quarter 3. A total of 330 cases were reported during quarter 4 comparing to 302 and 154 cases were reported during the third and second quarters

Distribution of Hepatitis A cases in Gaza strip, years 2011-2012



of the year 2012 respectively. During the fourth quarter 2011 a total of 178 cases were reported (about 46% less than this year). In spite of the usual increase of reported number of cases during this period of the year, this number reached more than duplication comparing to the same period of the previous year which can be considered as an outbreak. This increased was almost in all governorates but the majority of reported cases (144 constitute about 56%) were reported in Mid zone and Rafah governorates. No cases of deaths were registered during this period.

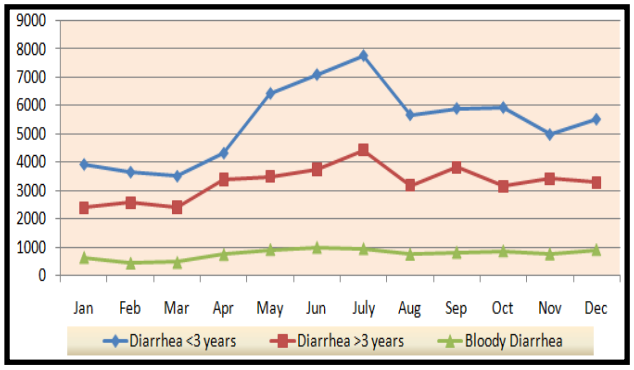
Strengthening of community health education regarding mode of transmission and prevention of this disease was conducted during the last period focussing on personal hygiene through hand washing especially after going to toilet and before eating and restriction of movement of patients for the hole symptomatic period.

Monthly Reported Diseases during the fourth quarter, 2012

Diarrheal diseases:

During the fourth quarter 2012, the diarrheal disease situation continued improving comparing to the previous quarter but it still higher than the reported number during the same quarter of the previous year. A total of 28.915 cases of diarrhea were reported during this period, representing almost about 32% increase comparing with the same quarter 2011 (21.894 cases were reported). This increase was mainly in North governorate and among age group less the three years. On the other hand there was a decrease in reported number of cases comparing with the previous quarters where a total of 33.355 and 31.213 cases were reported during the third and second quarters respectively.

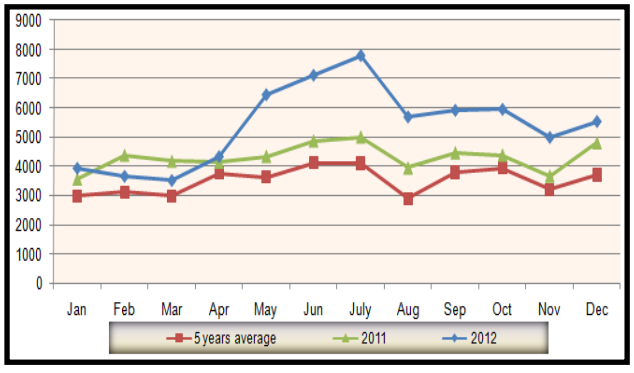
Distribution of all types of diarrheal diseases in Gaza strip, 2012



Diarrhea < 3 years:

There was a slightly decrease in incidence during the forth quarter 2012, where a total of 16.463 cases were reported while a total of 19.370 cases

Distribution of diarrhea among children less than 3 years in Gaza strip, 2011-2012



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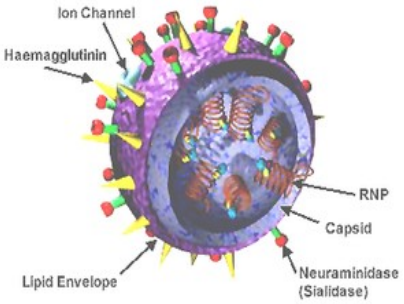
Case Definition for seasonal Influenza:

Influenza is a serious public health problem that causes mild to severe illness, and at times can lead to death mainly for higher risk populations. Case definitions are provided for mild disease of influenza-like illness (ILI), acute respiratory infection (ARI) and severe acute respiratory infection (SARI)

ILI: A person with sudden onset of fever of >38 °C and at least one of the following two respiratory symptoms, in the absence of other known causes: Dry cough or Sore throat



ARI: An acute respiratory tract infection that is caused by an infectious agent transmitted from person to person. The onset of symptoms is typically rapid, over a period of hours to several days. Symptoms include fever, cough, and often sore throat, coryza, and shortness of breath, wheezing, or difficulty breathing.

SARI: A person meeting the case definition of influenza-like illness (sudden onset of fever >38 °C with at least one of the following two respiratory symptoms: dry cough, sore throat in the absence of other known causes) **AND** shortness of breathing **OR** difficulty in breathing requiring hospital admission.

Influenza is a contagious respiratory illness caused by orthomyxovirus family: influenza virus A, B and to a much lesser extent influenza virus C. Human influenza A and B viruses that routinely spread between people cause seasonal epidemics of disease each year. Type A influenza viruses are further typed into subtypes according to different kinds and combinations of virus surface proteins. Among many subtypes of influenza A viruses, currently influenza A (H1N1) and A (H3N2) subtypes are more frequently circulating among humans everywhere. Type C influenza cases occur much less frequently than A and B. That is why only some subtypes of influenza A and influenza B viruses are included in seasonal influenza vaccines. The influenza virus is unstable and new strains and variants are constantly emerging that can cause an influenza pandemic.

The virus is spreading from person to person via droplets since it can survive for a short time on surfaces and can be spread by this route if the virus is introduced into the nasopharyngeal mucosa before it loses infectivity. The incubation period is short, about 18 to 72 hours.

In 2009, a new subtype of influenza A caused by H1N1 strain of virus (popularly known as the swine flu) characterized by its rapid spread among humans all over the world has emerged affecting a lot of people. In August 2010, WHO announced that the pandemic was over and the world is in a post-pandemic period and hence H1N1 is still circulating worldwide and is considered currently as a human seasonal flu virus that will be circulated in the coming winters and indigenous transmission will occur.

This new Influenza A H1N1 virus is resulting from genetic mutation in the virus RNA by reasortment with Influenza AH3N2 virus RNA giving the mentioned virus the possibility to affect humans. The usual symptoms include fever, chills, cough, sore throat, headache, runny nose, sneezing, body aches, vomiting, nausea and fatigue or tiredness. Influenza A H1N1 proved to be relatively mild and the pandemic it caused was not as serious as originally predicted. As in all countries where virus was detected, most cases were mild. Only a small number led to serious illness and rarely death, and these were mostly in patients with existing health problems that had already weakened immune system. The overall mortality caused by Influenza H1N1 infection is estimated to be less than 1%.

To prevent the flu it is recommended getting influenza **vaccine** each year. The seasonal flu vaccine protects against the influenza viruses that research suggests to be most common. This year, seasonal influenza vaccine includes the following influenza viruses: influenza A (H1N1) virus, influenza A (H3N2) virus and influenza B virus. Vaccination is especially recommended for people at higher risk of serious influenza complications.

Vaccination and early treatment with antiviral medications are

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AIDS World Day

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providing proof that ending the HIV/AIDS epidemic is not only feasible but achievable.

As a result of global initiatives and programs, AIDS-related deaths have dropped by more than 25 percent between 2005 and 2011 worldwide. There are now 700,000 fewer new HIV infections in the world annually and 600,000 fewer deaths than there were in 2005. However, despite these advances, the epidemic of HIV/AIDS is far from over. According to the most recent statistics from UNAIDS, there are still 2.5 million new HIV infections worldwide and 1.7 million deaths annually from this disease. Globally, there are 34 million people living with HIV and half do not know their HIV status. Nearly half of the people in need of antiretroviral treatment (6.8 million) do not have access to these life-saving medications, and as many as 50 percent of them will die within 24 months if they do not receive therapy.

In the developed countries, a great success was achieved regarding decreasing the newly infected people, decreasing deaths due to AIDS and reducing discrimination. Much of the progress is attributed to the life-saving medications, called antiretrovirals (ART), to treat those infected with HIV. In the other hand, developing countries still registered high numbers of new cases and deaths and low access to ART. In the year 2011, the Eastern Mediterranean region registered the highest incidence of newly registered cases and deaths in the world, where 560.000 new cases were registered and only 13% of infected persons eligible to treatment have access to ART.

Palestine still register very low incidence and prevalence of HIV cases which do not rep-resent serious problem on public health. That means strong effort is needed to maintain this situation in the future.

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Diarrheal Diseases

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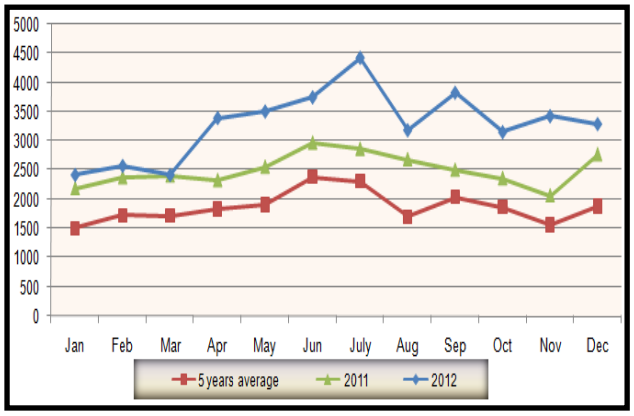
were reported in the previous quarter. On the other hand during the same quarter 2011, a total of 12.839 cases were reported representing about 22% decrease comparing to this year. The majority of cases were reported mainly in North governorate.

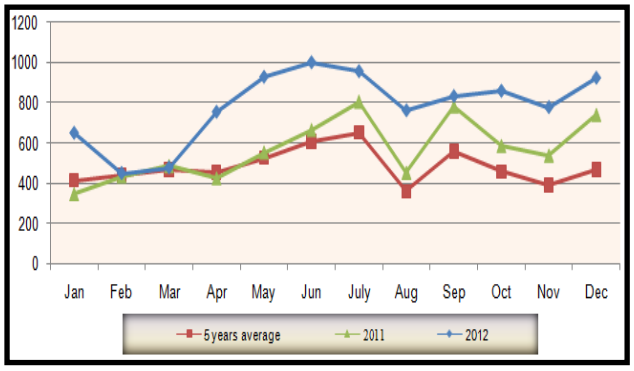
Distribution of diarrhea more than 3 years in Gaza strip, 2011-2012



Diarrhea > 3 years:

There was a slightly decrease in incidence during the fourth quarter 2012, where a total of 9.874 cases were reported while a total of 11.436 cases were reported in the previous quarter. During the same quarter 2011, a total of 7.188 cases were reported. The majority of cases were reported mainly in North governorate.

Distribution of bloody diarrhea in Gaza strip, 2011-2012



Bloody Diarrhea:

There was appropriately the same incidence of reported cases during the fourth and third quarters 2012. During the fourth quarter 2012, a total of 2.578 cases were reported while a total of 2.549 cases were reported in the previous quarter. This situation represents a clear increase comparing to the same quarter 2011 where a total of 1.867 cases were reported. The majority of cases were reported mainly in North and Mid-Zone governorates.

Continuous monitoring and evaluation of activities are essential to assure the progress and effectiveness of national diarrheal disease control programs.

Seasonal Influenza

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very important for people at high risk to prevent morbidity and mortality.

In Palestine, influenza viruses infections are endemic and have a seasonal trend variation. MOH has all necessary testing reagent, drugs and qualified health personnel to deal with influenza disease.

The most important way to diminish flu spreading is to have good respiratory and hand hygiene hand washing with soap and water.

The following national guideline has been prepared for dealing with suspected cases of H1N1 based on the current situation in the Gaza strip:

In case a patient is diagnosed as suspected seasonal influenza by any of health care providers, it must be classified as the following:

- Simple cases of ILI or ARI and not included in the high-risk population (see below) must be treated symptom-matically.
- Simple cases of ILI or ARI and included in the high-risk population must be referred to the epidemiology depart-ment at the governorate to be treated by Tamiflu and remain at home. In case of severe consequences (complications) these cases must be referred to the hospital.
- Cases with SARI must be referred to the hospital to be admitted and treated directly by Tamiflu.
- Laboratory samples must be collected from some admitted cases in order to confirm the diagnosis.

High-risk population

These groups include:

- Infants and persons aged 65 years or older;
- Persons younger than 19 years who are on chronic aspirin therapy;
- Pregnant females; and
- Persons of any age with chronic medical or immuno-suppressive conditions.

Non-Specific Meningitis cases

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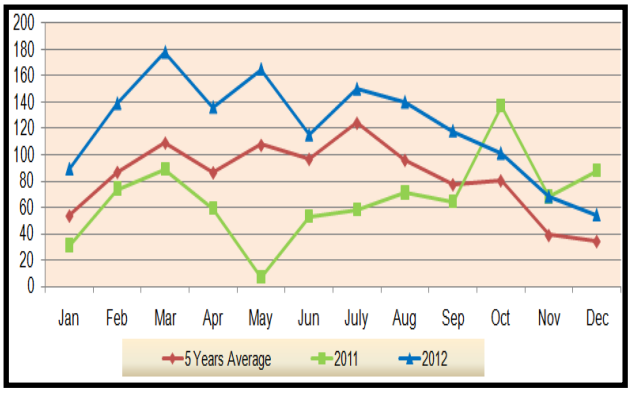
cases of NSM were reported while a total of 408 cases were reported during the third quarter 2012.

Distribution of non-specific Meningitis cases in Gaza strip, years 2011-2012



During the same quarter 2011, a total of 293 cases were reported.

All reported cases were diagnosed based on clinical picture, CSF findings (measurement of cells, protein and sugar levels), negative CSF culture and for some cases gram stain was negative. As there is no confirmatory tests in Gaza strip for this disease, all cases were considered as probable non specific meningitis cases.

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