All cases of suspected measles, pertussis, diphtheria, meningitis, or cholera, and unusual increases in incidence of any disease, and animal outbreaks of avian influenza, anthrax, brucellosis or other zoonoses should be reported immediately to the DEWS team in the relevant province or the national focal point – 0799-607107 or the WHO focal point – 0799-409996.
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**DEWS Data/Events in 2008 (January-December)**

Out of total 5,685,440 clients recorded in 130 Sentinel Sites during 2008, 14.3% (814,290) of consultations were reported due to cough and cold and 3.5% (199,215) of consultations were reported due to pneumonia. In the same year, 10.7% of all consultations or 595,410 events were reported due to diarrheal diseases (7.5% due to Acute Watery Diarrhea, 2.2% due to...
Bloody Diarrhea and 1.0% due to acute watery diarrhea with dehydration.

In comparison with previous year (2007), the percentage of ARI diseases decreased by 1%, whereas the percentage of diarrheal diseases decreased by 0.6%. The percentages of total cases of DEWS target diseases reported by all regions in 2008 make about 30.8% of total clients. The chart above shows the percentages of DEWS target diseases as percentages of total clients, by age groups in 2008.

**DEWS Diseases During 2008 by Month and by Age Group:**

Except for the month of January during the whole course of the year, the cases of DEWS Target diseases among children less than 5 years of age, recorded higher than in age group 5 years and above. The considerable difference of DEWS diseases between these two age groups can be seen in summer period i.e. June through September. Please refer to chart below:
Acute Respiratory Infections (ARI) is one of the leading causes of morbidity and mortality in Afghanistan. Since the start of DEWS surveillance, the scrutiny of data indicates clearly that consultations due to ARI diseases make around 20% of total clients. The highest records of ARI diseases have been reported in Winter Season (December to March). The following Line-chart shows comparatively the trend of ARI diseases in last two years (2007-2008).
Percentage of Diarrheal Diseases by Weeks in 2007/2008:
Like ARI diseases, Diarrheal Diseases have also higher events in comparison with all other causes of morbidity in Afghanistan. The percentages of diarrheal diseases from total clients make also more than 10% of events. The following chart shows the trend of consultations due to diarrheal diseases reported by DEWS sentinel sites in 2007 and in 2008. The percentages of ADD consultations in 2008 from the beginning of the year till week 38 in comparison with percentage of 2007 is lower, from week-37 of 2008 up to end of the year have higher percentage. The reason that the percentages of diarrheal diseases from week-38 to week 44 of 2008 in comparison with 2007 are higher. Especially during weeks 40-44 the trend line shows its peak, because the outbreaks of suspected Cholera were reported (in the period 21st August to 8th November) from 17 provinces of Afghanistan. During the foresaid period, 6620 consultations with 26 Deaths cases were reported. The highest cholera cases were reported from Samangan province with 3686 cases and followed by Faryab province with 1114 cases.
Monthly Data of ARI/ADD in Last Two years:

The percentages of Acute Respiratory Infections and Acute Diarrheal Diseases in last two years have been indicated on the monthly basis as the line-chart below; and from the chart it is clearly visible that the highest events of ARI take place in the period November through March, whereas in the same period the ADD cases reach its minimum points. But in Summer Season, opposite to the winter time, the ARI cases minimize, whereas the ADD cases maximize. This situation will be repeated each year in the certain periods. If we compare the frequencies of both ADD and ARI diseases in 2007 with frequencies in 2008, we will find that the ARI and ADD have had higher events in 2007 than in 2008.
**Percentage of ARI and ADD from Total Clients in 2008 by Months**

The Bar-chart below shows a typical picture of acute respiratory infections diseases (Cough & Cold and Pneumonia) and Diarrheal Diseases (Acute Watery Diarrhea, Bloody Diarrhea and Acute watery Diarrhea with Dehydration) during the course of 2008 by months. As the chart indicates, the events of ARI has been recorded in all months of the year, but it has started increasing in October and reach its peak in the months of January and February; during summer season (June-August) the events of ARI diseases minimize, whereas the percentages of Diarrheal diseases opposite to ARI, minimize during winter season (December-February) and maximize in summer season (June-August). In this regard the responsible department of CDC may pay attention in control and prevention of these seasonal diseases.

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**Percentage of ARI/ADD from Total Clients by Months in 2008**

- **ARI-08**: 29.5%, 28.9%, 23.0%, 18.7%, 15.0%, 12.6%, 11.7%, 10.8%, 11.2%, 13.7%, 16.2%, 22.0%, 26.0%
- **ADD-08**: 4.3%, 3.9%, 5.3%, 8.0%, 12.6%, 15.6%, 16.7%, 15.9%, 7.1%, 4.6%

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All cases of suspected measles, pertussis, diphtheria, meningitis, or cholera, and unusual increases in incidence of any disease, and animal outbreaks of avian influenza, anthrax, brucellosis or other zoonoses should be reported immediately to the DEWS team in the relevant province or the national focal point – 0799-607107 or the WHO focal point – 0799-409996.
Main Causes of Mortality Among DEWS Diseases

Among all DEWS target diseases more than 85 percent of deaths cases have been caused by ARI-Pneumonia, Acute Diarrheal Diseases and Meningitis/Sever Ill Child (Men/SIC). The following chart shows the trend of mortality of these three main causes of deaths in 2008 by week. The chart also indicates that the most deaths cases caused by Pneumonia and Meningitis/SIC occurred during cold period, whereas the highest cases of deaths due to diarrheal diseases took place in summer season.
Deaths Cases Caused by Dews Diseases in 2008

As a total 2885 cases of deaths have been reported by sentinel sites that caused by DEWS target diseases in 2008. The chart below indicates that more than 90 percent of all diseases have caused by ARI, ADD and Men/SIC. The bar-chart and the Pi-chart shows the number and percentages of deaths cases reported in DEWS sentinel sites in 2008 by cause of mortality.

Case Fatality Rate of the most frequently Occurred Diseases:
As mentioned above, ARI and ADD are the leading causes of morbidity and mortality and the trend of percentages of these diseases showed in charts above. The next chart is indicating the recorded cases and deaths among children less than five years due to the above mentioned diseases. From the data we can find that the Case Fatality Rate per1000 (CFR‰) recorded Pneumonia cases is equal to 7.5, AwD = 0.23, BD = 0.12, AwDwD = 8.6, Men/SIC =145.8, Malaria=1.1 and Sus AVH = 14.5 per 1000 recorded cases in SS. The calculated CFRs show that the highest CFR of the mentioned diseases among children <5 years of age has suspected Meningitis/SIC and followed by Acute Viral Hepatitis and Acute Watery Diarrhea with Dehydration.

# of ARI & ADD cases and Deaths among Children <5 yrs. in 2008
Case Fatality Rates (‰) of the most frequently occurred diseases among age group greater equal five years are:

Pneumonia = 1.8, AwD= 0.03, BD= 0.04, AwDwD= 1.92, Men/SIC= 65.0, Malaria= 0.87 and Suspected AVH = 2.65 per 1000 suspected cases. From the comparison of case fatality rates of the same diseases between age group less than five years and age group five years and over, we find out that age group less that five years are highly vulnerable and their risk are several times higher than the age group five years and above.

Deaths Records in 2008 by Region:
**Vaccine Preventable Diseases (VPD)**

Vaccine Preventable Diseases or Children’s killer diseases are still health problem in Afghanistan and are part of DEWS target diseases, so that sentinel sites report on the suspected cases of vaccine preventable diseases on weekly basis. The suspected cases of these diseases in 2008 by weeks are showed as line-chart below. The chart shows that the suspected cases of these diseases have reported mostly during spring period (W7-W27) of the year.

**Suspected Cases of Tetanus and AFP in 2008 by Weeks**

![Graph showing suspected cases of Tetanus and AFP in 2008 by weeks]

**Suspected Cases of Measles and Pertussis in 2008 by Week**

![Graph showing suspected cases of Measles and Pertussis in 2008 by week]
If we consider the suspected cases of Vaccine preventable diseases, the highest cases of Measles and pertussis have been reported from Nangarhar and Bamyan regions, whereas the lowest cases are reported from Kabul and Kandahar regions. The Acute Flaccid Paralysis is distributed in all regions. Please refer to the following Pi-Chart:

The following Line/Bart-Chart shows the suspected cases and number of deaths, caused by Vaccine Preventable diseases in 2008.
**Malaria suspected cases, Reported by Sentinel sites in 2007/2008**

The following charts are showing the percentage distribution of Malaria suspected cases from total clients by months (Time Distribution) in 2007/08 and by region (Place Distribution) in 2008.

- The chart above indicates that the most cases of Malaria have been recorded in hot season of the year (May–October) in 2007 as well in 2008.
- The chart also states that the percentages of Malaria cases from total clients have been decreases in 2008 in comparison with percentages in 2007.
- The Bar-chart below shows the distribution of Malaria cases recorded in DEWS Sentinel sites in different regions.
- As we know Nangarhar region is the endemic area of Malaria and the following chart also clearly shows that the highest of Malaria cases have been recorded in Nangarhar region and followed by Paktia and Badakhshan/Kundoz region, whereas Balkh region recorded the lowest number of Malaria cases in 2008.
All cases of suspected measles, pertussis, diphtheria, meningitis, or cholera, and unusual increases in incidence of any disease, and animal outbreaks of avian influenza, anthrax, brucellosis or other zoonoses should be reported immediately to the DEWS team in the relevant province or the national focal point – 0799-607107 or the WHO focal point – 0799-409996.
Number of suspected Consultations and Deaths Due to Typhoid Fever recorded in SS in 2008:

Number of Malaria Cases and Deaths Among Age Group 5 Year and Above in 2008 by Months

Number of Typhoid F. Cases and Deaths by Months in 2008

All cases of suspected measles, pertussis, diphtheria, meningitis, or cholera, and unusual increases in incidence of any disease, and animal outbreaks of avian influenza, anthrax, brucellosis or other zoonoses should be reported immediately to the DEWS team in the relevant province or the national focal point – 0799-607107 or the WHO focal point – 0799-409996.
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Annex-B: Cholera Outbreaks in 2008:
In 2008, almost 17 provinces of Afghanistan affected by cholera outbreaks and as total 6620 cases were reported, so that in each province at least one positive case was confirmed except for Logar and Kabul provinces. 26 death cases were also recorded. In this regard the Case Fatality Rate of cholera in Afghanistan makes around 0.4%. Around 26% of cases were recorded in OPD, whereas 74% of the cholera patients were hospitalized. The first suspected cholera case was recorded in Lalpur district of Nangarhar province on 21st August 2008 and the last suspected cholera cases were on November 8, 2008 in Aibak city of Samangan province. The following Bar-chart indicates the suspected Cholera cases in various provinces of Afghanistan.
Annex-C: Laboratory Examinations

By any outbreaks of any disease, DEWS local team during investigation collects also specimens from affected persons and sends it to MoPH-APHI central laboratory for urgent examination and diagnoses of the diseases. In 2008, DEWS regions have sent 2056 samples on various diseases to Central Laboratory of Afghan Public Health Institute for examination. The result of examination found 19.7% of all received specimen positive.

The following Bar-charts show the number of samples examined for specific diseases and found positive by diseases and by region.

Number of Specimens Examined in CPHL by Diseases and Number found Positive in 2008

Number of Samples Submitted by DEWS Regions in 2008 to CPHL and # confirmed Positive

All cases of suspected measles, pertussis, diphtheria, meningitis, or cholera, and unusual increases in incidence of any disease, and animal outbreaks of avian influenza, anthrax, brucellosis or other zoonoses should be reported immediately to the DEWS team in the relevant province or the national focal point – 0799-607107 or the WHO focal point – 0799-409996.
Annex-D: Gulran Diseases Outbreak (Re-emerging)

Gulran district of Hirat province experienced drought years in 70’s decade of last century, so that as consequences the inhabitants of Gulran and mostly poorest families were affected by a little known disease with typically cases of hepatic veno-occlusive disease.

In 2007/2008 after 2-3 years droughts the outbreak of the same disease re-emerged once again, so that Afghan Public Health Institute (APHI)/DEWS tasked technical teams to investigate and assess the causes of the outbreak, affected person and the affected villages. The assessment result shows that as a total 271 inhabitants of Gulran district were affected, out of whom 38 percent were females. It also indicates that around 27% of the patients were children of age less than or equal 12 years. Also from the affected inhabitants 44 persons were died. For more details please refer to the tables below:

A) Frequency of Affected persons by Gulran Disease and by gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>103</td>
<td>38.0</td>
<td>38.0</td>
<td>38.0</td>
</tr>
<tr>
<td>M</td>
<td>168</td>
<td>62.0</td>
<td>62.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>271</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

B) Age distribution of Gulran Disease patients

<table>
<thead>
<tr>
<th></th>
<th>No of Cases</th>
<th>Percentage</th>
<th>No of Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 years and less</td>
<td>64</td>
<td>23.6</td>
<td>?</td>
</tr>
<tr>
<td>More than 12 years</td>
<td>207</td>
<td>76.4</td>
<td>?</td>
</tr>
<tr>
<td>Total</td>
<td>271</td>
<td>100</td>
<td>44</td>
</tr>
</tbody>
</table>

The following chart shows the frequency affected Gulran inhabitants by age and according to date of disease onset.
ANNEX-E: CCHF Outbreaks in Herat

From July to October 2008, a total 30 cases of CCHF were confirmed in different districts/locations of Heart province. The first suspected CCHF case was a 33 years old woman in Zindajan district of Herat province in July 2008, whereas the second case of CCHF was a 20 years old lady in Heart City. The third case of CCHF was also a 33 years old woman in Karukh district and the last case of CCHF 20 year old woman from Kababian village of Heart Province. In general the cases were recorded among those families breeding live stocks. Sample were collected from the case and close contacts and sent to Central Public Health Laboratory for examination and diagnosis. The following map and charts show the location of cases, age distribution and time distribution of cases.
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