Islamic Republic of Afghanistan
Ministry of Public Health
Afghanistan National Public Health Institute
Surveillance Directorate

Disease Early Warning System (DEWS)

Surveillance, Early Detection and Response to Health Events

ANNUAL REPORT 2012

Acknowledgment

Communicable diseases pose a significant and growing threat on human health at the local, national, and international level. Local or widespread outbreaks of communicable diseases are largely unpredictable with great public health, social and economic consequences and impact on nations. They must be recognized and controlled rapidly in order to minimize their impact. Public health policies, strategies, and interventions to reduce any impact of these outbreaks rely heavily on prompting timely individual, community, institutional actions, including early detection and response to these events.

A failure or inability to detect and response to communicable and vaccine preventable disease outbreaks on timely bases will lead to higher level of mortality and morbidity. The Disease Early Warning System (DEWS), an unique entity of public health surveillance on priority communicable and vaccine preventable disease within MOPH , has attained tremendous gain in this area; it detects and responses to several disease outbreaks in all over the country on timely bases. In addition, the system provides weekly and annual surveillance data to all stakeholders. This annual report is part of surveillance data dissemination at the national level.

We are especially grateful to the surveillance field staff and other DEWS personnel for their courage and determination in fieldwork and ensuring the early detection and response to mentioned events. It is our hope that this report will be useful for results-oriented decision-making, and inform us to control and prevent the communicable and vaccine preventable disease. Given that the public health challenges particularly on the communicable disease and new emerging infection are increasing, it is our sincere hope that the system plays a proactive role to prevent the spread of mentioned health problems at the local, national and international levels.

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Minister of Public Health
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Acknowledgment

On behalf of the Afghan National Public Health Institute (ANPHI), I would like to express my gratitude to Surveillance Directorate and DEWS team at Ministry of Public Health for their contribution to this report and to DEWS regional officers who enriched this report by their in-valuable and helpful comments.

DEWS focal points working in the sentinel sites countrywide and colleagues from Central Public Health Laboratory are acknowledged for providing of disease and laboratory results on time that serve the best for this report. We would like to thank all health professionals and stakeholders at central and provincial levels that helped as a team in timely detection, investigation and response of outbreak.

Finally, the Communicable Disease Surveillance and Response (CSR) unit of World Health Organization Afghanistan (WHO) Country-Office is gratefully acknowledged for their technical supports provided in development and publication for this document and we would like to thank all donors, particularly USAID for financial support of Disease Early Warning System (DEWS) in Afghanistan.

With Best Regards,

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Contents

1. Introduction

Afghanistan National Public Health Institute (ANPHI) is a key General Directorate of Ministry of Public Health (MoPH) consisting of five departments; Surveillance, Health Promotion, Research, Public Health Training and Central Public Health Laboratories. Surveillance Directorate is critical department of ANPHI which is mostly involved in routine reporting of priority diseases and outbreak investigation and response. In Afghanistan, Disease Early Warning System (DEWS)[1] was first established in mid-December 2006, with technical support of World Health Organization (WHO) and financial support of the United States Agency for International Development (USAID) as a project under Surveillance Directorate. DEWS is a sentinel site based surveillance system for weekly reporting of infectious diseases morbidity and mortality operating in public and private health facilities (so far major private hospitals included) while with daily reporting system for unusual events and suspected outbreaks reported by community and Provincial Public Health Directorates (PPHDs) through Codan Radios system and surveillance focal points of the area. In areas where there is no focal point so far community report the disease spread and unusual events through, Provincial Council, PPHDs, governors, parliamentarians and media. Since 2007 sentinel sites expanded from 8 provinces, in 8 regions to all 34 provinces. In 2012, there were 330 sentinel sites operating in regional, provincial and district hospitals and in basic and comprehensive health facilities in 34 provinces of the country and covered 80% of the districts nationwide. The function of this sentinel surveillance system is to detect not only known targeted diseases with established case definitions but also diseases, events or hazards that are not specifically included in the formal reporting system. Data on more than 28 outbreak potential diseases and unexplained events and deaths are also collected with taking appropriate and on time prevention and control measures.

[1] Disease Early Warning System (DEWS) is surveillance and response system for communicable diseases and other health events having a combined approach of indicator and event based surveillance and outbreak detection and response in Afghanistan.

1.1. Diseases of outbreak-potential in Afghanistan

According to the DEWS six years data from 2007 to 2012, outbreaks of infectious diseases such as Measles, Cholera, Acute gastroenteritis, ARIs, Pertussis, Chicken pox, Hepatitis, Typhoid fever and Malaria are more frequent in Afghanistan. Outbreaks of Meningitis, Crimean-Congo hemorrhagic fever, Mumps, Scabies, Pandemic Influenza H1N1, Leishmaniasis, Brucellosis, Q-fever and Food poisoning are reported less frequently. It is evident that most of these outbreaks are preventable with simple strategies and inexpensive available vaccines. But, poor access and low utilization of services due to insecurity, repeated population displacement and lack of sufficient resources outbreak of said diseases are still common in Afghanistan.

1.2. About this report

This report contains the official statistics in textual, tabular and graphic form, for the reported cases and deaths due to targeted priority diseases (mainly infectious) and outbreaks in Afghanistan for 2012. Unless otherwise noted, the data included in this report are from January 1, to December 31, 2012.Data collected for 2008, 2009, 2010, and 2011 have been compared with 2012 in some instances .Information for this report are collected and compiled from weekly morbidity & mortality reports from 330 sentinel sites and outbreaks reports sent by provincial and regional DEWS surveillance offices to the national surveillance directorate. DEWS Regional Coordinators (DEWS-RCs) receive reports from DEWS Provincial Offices (DEWS-POs) and DEWS-POs receive reports from DEWS Focal Points deployed in the sentinel site[1]. Information from RH/PH collected on daily basis by the department of Codan Radio and other sources of MoPH on emergency events (bomb explosions, road traffic accidents, burns, natural disasters, etc.) is also included as a part in this report. This report will provide an overview of the situation of priority diseases under surveillance in Afghanistan. The report will help and enable epidemiologists, public health experts and policymakers to make better evidence-based decisions to improve prevention and control programs.

[1] Sentinel site for DEWS surveillance is based in Health Facilities in Afghanistan including Regional Hospitals, Provincial Hospitals, District hospitals, Polyclinics, CHCs and BHCs

1.3. Vision

Responsive and sustainable Public Health Surveillance System in Afghanistan that provides timely and reliable information for program managers and policy makers to make informed decisions for control and prevention of health related problems ensuring healthy society at national land global level.

1.4. Mission

Surveillance directorate is committed, systematically and continuingly, to collect, analyze, interpret, integrate and disseminate well-timed information to relevant stakeholders for control and prevention of diseases. It is also mandated to detect, verify, investigate, respond immediately and notify outbreaks of health events all over the country.

1.5. Goal

The main goal of Public Health Surveillance System is to contribute to the reduction of the morbidity, mortality and disability due to various health related problems in Afghanistan.

1.6. GUIDING PRINCIPLES

- Evidence-based decision making
- Participation and partnership
- Quality
- Accountability and Transparency
- Responsiveness
- Simplicity
- Sustainability
- Timeliness

1.7. OBJECTIVES

- To monitor the distribution and seasonal trend of diseases
- To assess public health status and define public health priorities

- To identify and rapidly respond to outbreaks and emerging events within 24-48 hours of occurrence
- To identify demographic and geographic populations at high risk
- To assist in developing evidence-based policy and allocate resources appropriately
- To notify World Health Organization regarding Public Health Emergency of International Concern (PHEIC)
- To evaluate health programs and stimulate researches
- To provide opportunity for capacity building of health workers

1.8. Surveillance methods

Sentinel sites

DEWS is a sentinel site surveillance system operating mainly in public health facilities countrywide. Initially regional/provincial hospitals in eight different geographical regions of the country were selected by DEWS team as sentinel sites in December 2006. By the end of 2010, there were 245 sentinel sites and in 2011 DEWS expanded to 283sites and during 2012DEWS establishing 47new sentinel sites and the number of sentinel sites reached 330 by December 31, 2012. These sentinel sites are operating in public regional, provincial and district hospitals, private hospitals, comprehensive and basic health centers and poly clinics in all 34 provinces and covered 80% of all districts and 18.5% of health facilities in Afghanistan. The distribution of the sentinel sites by region, province and type of health facility are shown in Table 1 and Figure 1.

1.9. Expansion and Selection of Sentinel Sites

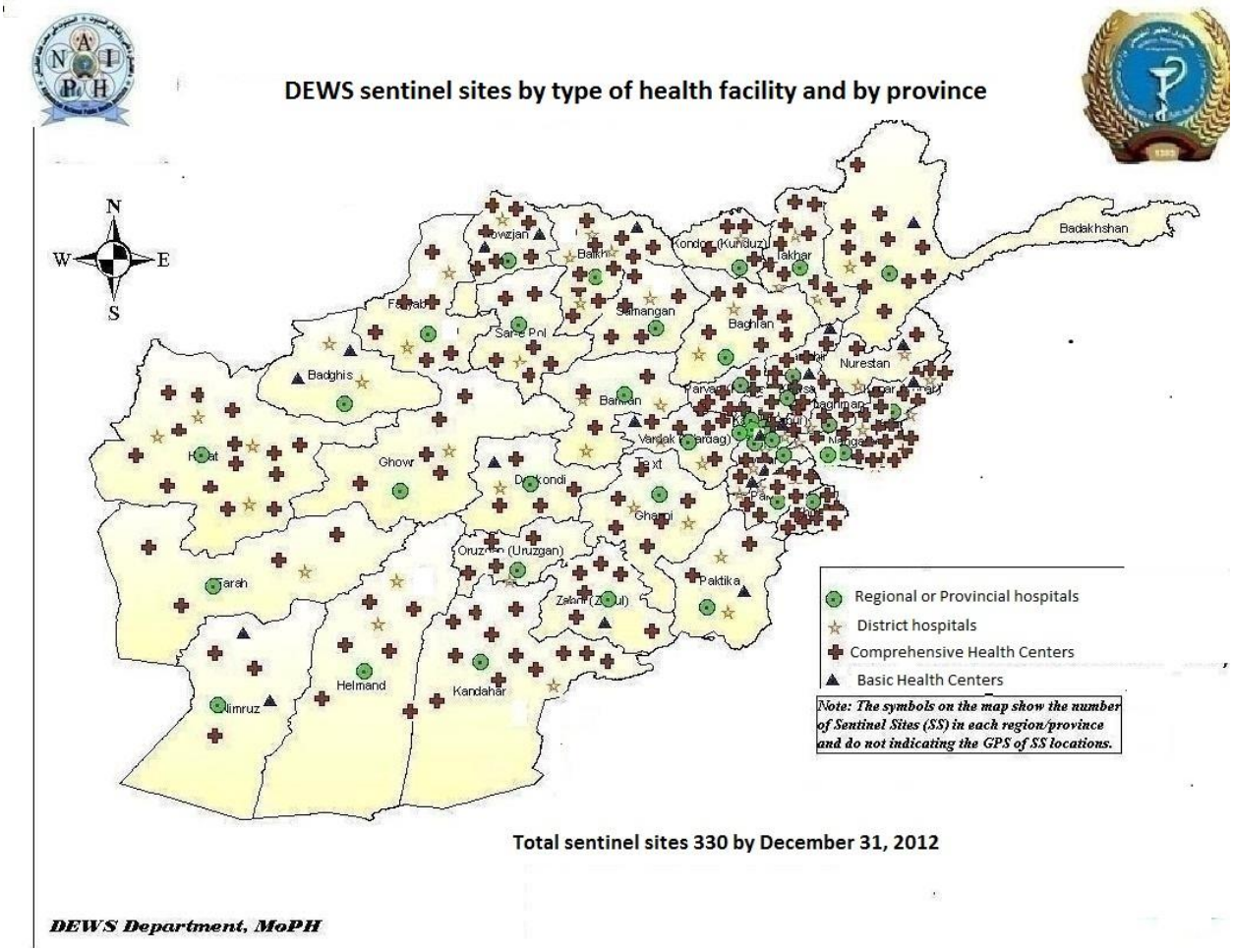
In 2012, the national target for the number of sentinel sites was 50 new sentinel sites or 18% increase from the 2011, whereas 47 new sentinel sites have been established in 2012. The selection of these sites are based on the geographic location, burden of communicable diseases in the area, history of past outbreaks, availability of communication systems (internet/mobile phones) and population density. However, the selection is done after the Provincial Health Coordination Committee (PHCC) approval in the provinces.

Table 1: Number of sentinel sites by region and type of health facility, end December 2012

Type of H.F[1] / Region	RH/PH	DH	CHC/BHC	Polyclinic	Total
Central East	14	12	27	2	**55**
North	5	10	34	0	**49**
North East	4	7	32	0	**43**
South	5	4	32	0	**41**
East	3	7	31	0	**41**
West	4	9	23	1	**37**
South East	4	4	26	0	**34**
Central West	4	9	17	0	**30**
Total	**43**	**60**	**224**	**3**	**330**

[1] RH: Regional hospital
PH: provincial hospital
DH: District hospital
CHC: Comprehensive Health Center
BHC: Basic Health Center

Figure 1: Distribution of sentinel sites in the country



1.10. Strengths and weaknesses of sentinel site surveillance

The current surveillance system generates evidence for policy and planning in terms of prevention and control of communicable diseases and conditions under surveillance. Since routine surveillance alone is not effective for early detection of disease outbreaks hence early warning component has been strengthened to detect outbreak alerts and respond to that. It is evident that incidence rate is ideally used for comparing disease frequency in different locations, at different times, or among different groups of persons with potentially different sized populations. But the true estimates of the incidence require further information than can be supplied by the sentinel surveillance system. To adjust for denominators DEWS surveillance system considers total consultations as denominator for calculations of rates and percentages. It is important to remember that this sentinel surveillance results are representative and generalizable for the population who have access to public health facilities while private sector

and community representation will be enhanced in coming years through inclusion into surveillance system.

1.11. Diseases under surveillance

Currently DEWS collect weekly morbidity and mortality data by age and sex disaggregation from sentinel sites on fifteen agreed upon priority diseases and pregnancy related deaths in a standardized format (Annex 2).These diseases/conditions are recommended for surveillance because they are;

- Main causes of morbidity and mortality in Afghanistan
- Diseases with highly epidemic potential to cause serious public health impact due to their ability to spread rapidly
- Ministry of Public Health -Afghanistan priority diseases
- Diseases of internationally public health importance
- Diseases that can be prevented by public health measures

The list of priority diseases may vary from time to time depending on the epidemiological situation of diseases, health system needs and capacity. Public health officials at MoPH and WHO - Afghanistan collaborate in determining which diseases should be added or deleted from the priority list for DEWS.

Table 2 below shows the list of priority diseases and conditions under surveillance. Each priority disease is introduced with a case definition, the 'HMIS case definition'. These case definitions were agreed upon by HMIS department, MoPH to be implemented nationally by all health workers in the country (Annex 2).

Table 2: DEWS targeted diseases and conditions for surveillance

S.No	Disease	S.No	Disease
1	Cough and Cold	9	Pertussis
2	Pneumonia	10	Diphtheria
3	Acute Watery Diarrhea(AWD)	11	Tetanus/ Neonatal Tetanus
4	Acute Bloody Diarrhea	12	Acute Flaccid Paralysis
5	AWD with Dehydration	13	Malaria
6	Meningitis/Severe Ill Child	14	Typhoid Fever
7	Acute Viral Hepatitis	15	Hemorrhagic Fever
8	Measles	16	Pregnancy-related deaths

Information on outbreak cases and deaths are also collected and analyzed by DEWS and specimens from each outbreak of diseases and unusual event are sent to Central Public Health Laboratory (CPHL) as it is required by the surveillance system for confirmation. Meanwhile, DEWS is doing case-based surveillance for Measles and collect samples from each individual case and send to CPHL for confirmation.

1.12. How DEWS work

All levels of Disease Early Warning System, from sentinel-sites to national directorate of surveillance, are involved in surveillance activities to detect and respond to the recommended priority diseases or events (although the different levels do not perform identical functions). These activities include the following core functions in six steps. The steps listed below are presented in conceptual order; in practice, however, steps may be at different order. For example taking actions might come quite soon after identification of the cases in a health facility.

Step 1- Identification of cases with priority diseases and events using standard case definitions at health facility level and early detection of the outbreaks at community level

Step 2 - Reporting morbidity and mortality data on a weekly basis and sharing outbreaks information at earliest, to the next administrative level through, SMS and phone call, meanwhile updating the hard and soft copies of data at health facility level and provincial level

Step 3 - Compilation, analyses and interpretation of data for distribution by time, place and person at multiple levels (sentinel-site, provincial, regional and national)

Step 4 - Investigation and confirmation of alerts and suspected outbreaks and response within 48 hours

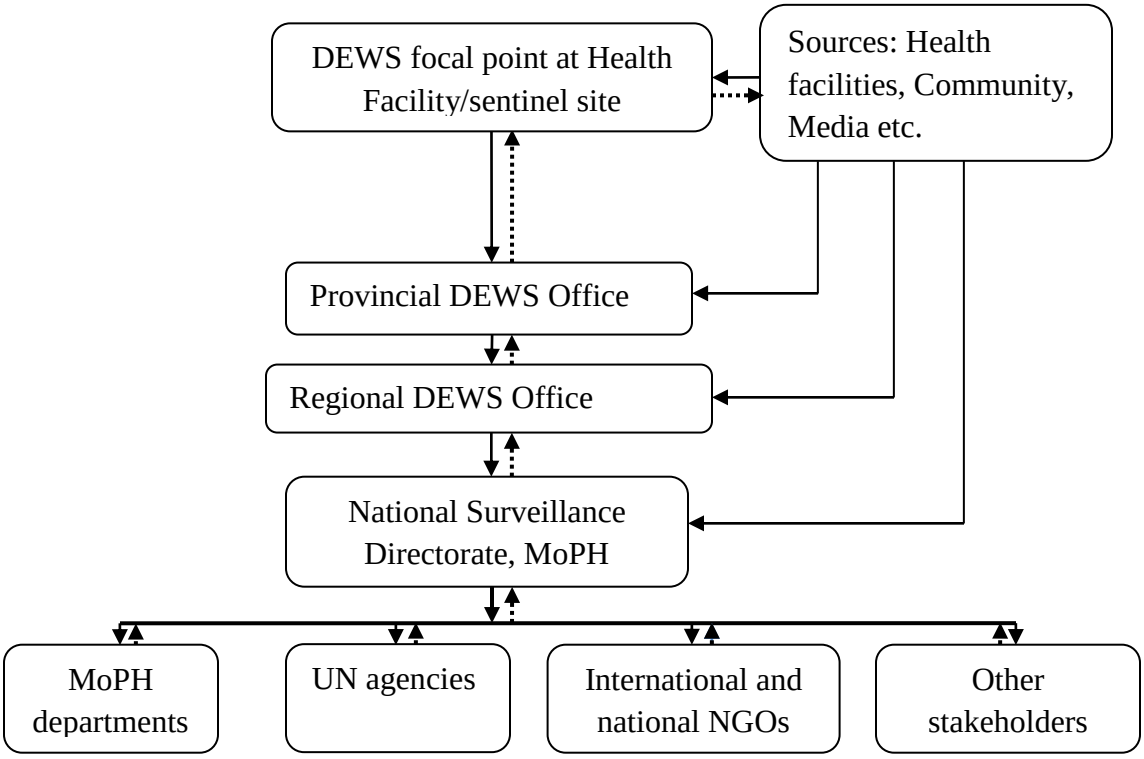
Step 5 - Dissemination of the findings from the analyses of morbidity and mortality weekly reports and outbreak reports to related MoPH departments, Local NGOs, Donors, and other international organizations

Step 6 - Taking timely actions (immediate and long term) to implement the appropriate public health preventive and control measures in coordination with stakeholders.

1.13. Information flow

The illustration below shows a usual flow of surveillance reporting and feedback throughout the system. The solid arrows show the reporting channel of the system while feedbacks are indicated by dotted arrows.

Figure 2: Flow of DEWS reports and feedbacks



DEWS focal points share the weekly report with the DEWS Provincial Office through mobile phones and signed paper report also submitted later on. Sometime reports shared on daily bases. All DEWS Regional and Provincial offices have access to internet, mobile phone and Codan Radio to communicate with national surveillance/DEWS department in Kabul. At the early stage, outbreaks are usually reported by mobile phone or Codan Radio then initial, update and final reports are submitted by Regional Offices to National Surveillance Directorate. Morbidity & mortality and outbreaks information are then shared with related MoPH departments, United Nations agencies working in health and humanitarian affairs, BPHS[1] and EPHS[1] implementing

[1] BPHS: The Basic Package of Health Services (BPHS) is a health service delivery strategy identifying a set of cost-effective primary health care interventions with particular attention to vulnerable group (e.g. women and children), and a strong focus on reaching out to the rural population and on ensuring equity

NGOs and other stakeholders i.e. the Ministry of Agriculture, Irrigation and Livestock (MAIL) and FAO[2], especially zoonotic diseases outbreaks.

[1] EPHS: Essential Package of Hospital Services(EPHS) identifies a standardized package of hospital services at each level of hospital(district, provincial and regional)

[2]FAO: Food and Agriculture Organization of the United Nations

2. Morbidity and Mortality

During 2012, a total of 14,205,433 new cases from all diseases were reported by all sentinel sites. A total of 4,679,891 patients (32.9 % of total new consultations) were consulted for diseases targeted for DEWS of which 51% were children less than five years old and 49% five years and over. Table 3 indicates number of cases and their proportion among total consultations for each DEWS targeted disease. The percentage of children less than five years with DEWS targeted diseases as a proportion of total consultations for all ages was 16.76 %.

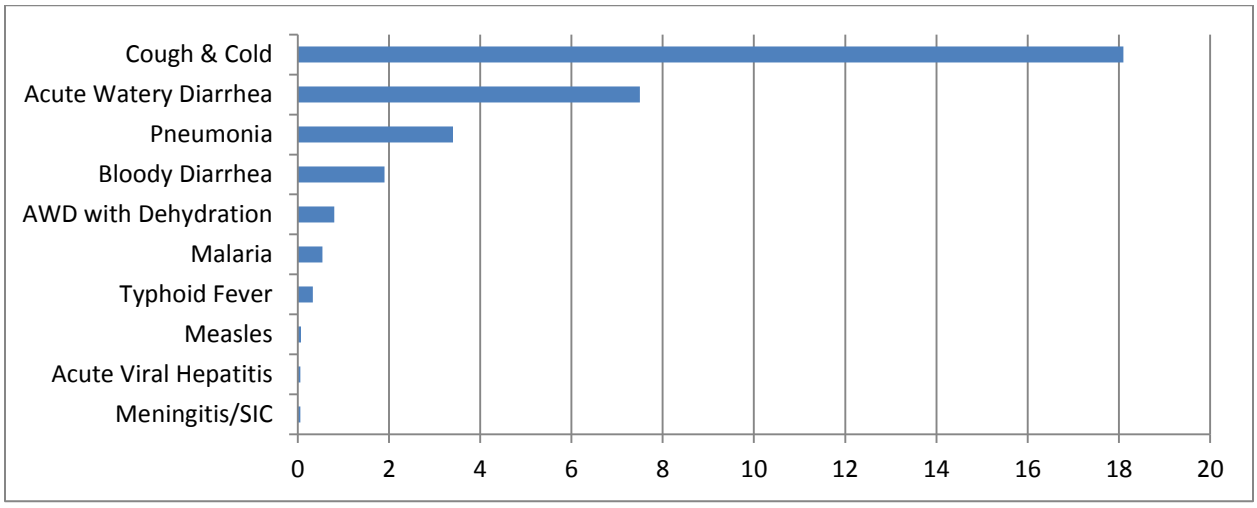
Table 3: Reported DEWS targeted diseases at national level by age

Disease/Condition	<5 years		>=5 years		All Ages	
	Number	%	Number	%	Number	%
Cough and Cold	1130216	25.7877	1441740	14.6776	2571956	18.1053
Pneumonia	328021	7.4852	159101	1.6198	487122	3.4294
Acute Watery Diarrhea	668103	15.2444	395923	4.0307	1064026	7.4904
Acute Bloody Diarrhea	127716	2.9142	141168	1.4373	268884	1.8930
AWD With Dehydration	74135	1.6916	40233	0.4096	114368	0.8051
Meningitis/ SIC	4910	0.1120	3209	0.0327	8119	0.0572
Acute Viral Hepatitis	2584	0.0590	6870	0.0699	9454	0.0665
Measles	7269	0.1659	2825	0.0288	10094	0.0711
Pertussis	293	0.0067	182	0.0019	475	0.0033
Diphtheria	9	0.0002	7	0.0001	16	0.0001
Tetanus/ Neonatal Tetanus	113	0.0026	53	0.0006	166	0.0012
Acute Flaccid Paralysis	492	0.0078	591	0.0024	1083	0.0040
Malaria	23518	0.5361	45762	0.4653	69280	0.4871
Typhoid Fever	14474	0.3293	60091	0.6116	74565	0.5245
Hemorrhagic Fever	55	0.0004	122	0.0011	177	0.0009
Pregnancy-related deaths			103	0.0007	103	0.0005
Total DEWS	**2381908**	**16.766**	**2297980**	**23.3899**	**4679888**	**32.9397**
Total Consultations	**4382704**	**100**	**9822729**	**100**	**14,205,433**	**100**

Figure 3 depicts the distribution of most common DEWS targeted diseases reported from all sentinel sites in the country in 2012. Acute Respiratory Infections (Cough and cold and Pneumonia) remain the most commonly reported illness with an overall proportion of 21.5 % among total consultations in all ages. The proportion of cases with Cough & Cold among total consultations was 18.1% (2,571,956 cases) while for pneumonia the proportion was 3.4 % (487,122 cases). Around 7.5% of children aged less than five years have experienced pneumonia this year. The percentage of children less than five years old with Cough and Cold and Pneumonia among the total cases of cough and cold and Pneumonia was 43.8% and 68.6%respectively. Acute Diarrheal Diseases (acute watery diarrhea, acute bloody diarrhea and AWD with dehydration) are the second most common conditions and accounted for 10.2% of the reported total consultations in the year 2012. Acute watery diarrhea consisted 7.7 % of total consultations and 0.8% were with dehydration. The percent of children younger than 5 years with acute watery diarrhea was 15.2%.

ARIs, acute diarrheal diseases, malaria and typhoid fever are among the major morbidities followed by measles, meningitis/Sever Ill Child and acute viral hepatitis in all age groups in 2012.Cough and cold, acute bloody diarrhea, acute viral hepatitis, malaria, typhoid and hemorrhagic fever were mostly reported in age group more than five years while the rest of the diseases were reported in children less than five years old.

Figure 3: Top ten DEWS targeted diseases



A total of 2,966 deaths due to DEWS targeted diseases were reported in 2012 that represent 27.5% of total reported OPD and IPD deaths. ARI-Pneumonia was the primary killer with 1,782 deaths followed by suspected meningitis (552 deaths) and Diarrheal diseases (370 deaths).

1.2. Cough and cold

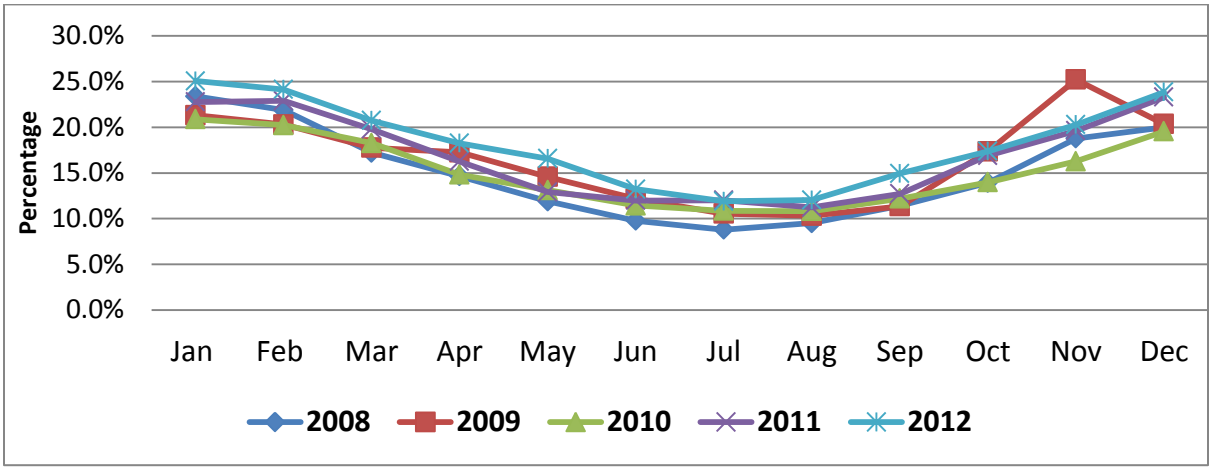
Cough and cold remains the most commonly reported illness in 2012. Figure 3 illustrates that greatest proportion of the total consultations is attributable to cough and cold cases (18.1%). In total, 2,571,956caseshave been reported as cough and cold, of which 1,120,216 (43.9%) were in children younger than five years old. This year, 25.8% of consultations in children younger than five years were due to cough and cold, compared with the previous years, there was significant increase in number of the cases reported countrywide, although this is most likely due to the expansion and improvements in the DEWS surveillance network.

Table 4: Cough and cold cases by region

Region	No. of cough and cold cases	% of cough and cold cases out of total consultations
East	475256	21.3
South East	224711	20.5
Central West	195406	20.3
North	412791	19.1
North East	245551	17.7
West	251145	16.4
Central	542996	16
South	224177	15.7
Total	**2,572,033**	

The 2012 proportion of the cough and cold cases among total consultations was highest in East region (21.3%), followed by South East (20.5 %) and Central West (20.3 %) regions (Table 4). Kapisa (27.1%), Logar (25.9%), Nuristan (25.3%), Khost (24.2%) and Kunar (24.1%) provinces reported highest proportions for cough and cold at provincial level (Table 28 Cough and Cold/Pneumonia cases by province). A clear seasonal trend by month for the last five years can be observed with peak in January, gradual decrease throughout summer months, and then increase throughout the winter at the end of the year (Figure 4).

Figure 4: Seasonal distribution of cough and cold cases, 2008-2012



2.1. Pneumonia

Out of total consultations, 487,122 (3.43%) were due to pneumonia in 2012. As usual, cases of pneumonia were mainly reported in children less than five years old, with 328,021 cases in 2012 (67.3% cases in children under five years as compared to 32.7% in age five years and old).In children younger than five years of age, 328,021 (7.5%) consultations were due to pneumonia while the percentage was 1.6% among age five years and above.

Table 5: Pneumonia cases by region

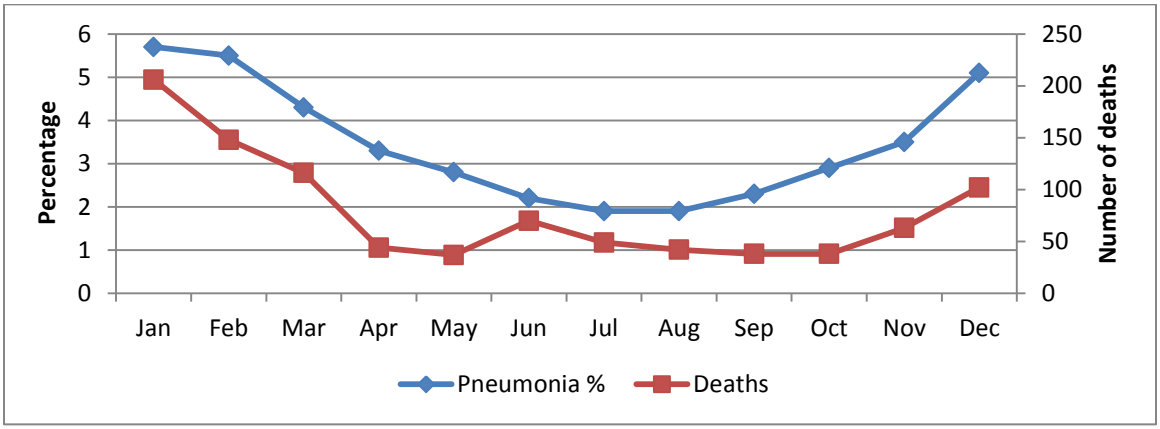
Region	No. of pneumonia cases	% of pneumonia cases out of total consultations
North	122479	5.7
North East	62445	4.5
Central West	35195	3.7
Central	125922	3.7
East	71986	3.2
South East	21790	2
West	24889	1.6
South	22473	1.6
Total	**487179**	

Table 5 indicates the proportion of pneumonia consultations among total consultations. High in North region (5.7%), followed by Northeast (4.5%) and Central West and West regions (3.7%) each. The provinces with highest percentage of consultations due to pneumonia are Sar-i-pul (8.7%), Jawzjan (8.6%), Baghlan (7.1%), Nuristan (5.4%),Bamyan (5.0%), Samangan and Logar

(4.8) each, Balkh (4.5%),Wardak(4,3%), and Logar (4.0) (Table 28 Cough and Cold/Pneumonia cases by province).

The 2012 trend of the pneumonia cases and deaths by month can be observed with peak in January and February in Figure 5.

Figure 5: Trend of pneumonia cases and deaths by month



Among total reported deaths due to DEWS targeted diseases, 1782(60.2%) were due to pneumonia. The associated case-fatality rate was 3.65 per 1000. Majority of the deaths (93.6%) were reported in children under the age of five years.

2.2. Acute Watery Diarrhea (AWD)

Acute diarrheal diseases (ADDs) remain the second most frequent illness (1,447,362 cases) accounted for 10.2% of total consultations.

Table 6: cases of AWD by region

Region	No. of AWD cases	% of AWD out of total consultations
South East	99723	9.1
South	129188	9
West	126164	8.2
North	174291	8.1
North East	109645	7.9
East	168198	7.5
Central West	62826	6.5
Central	194040	5.7
Total	**1,064,075**	

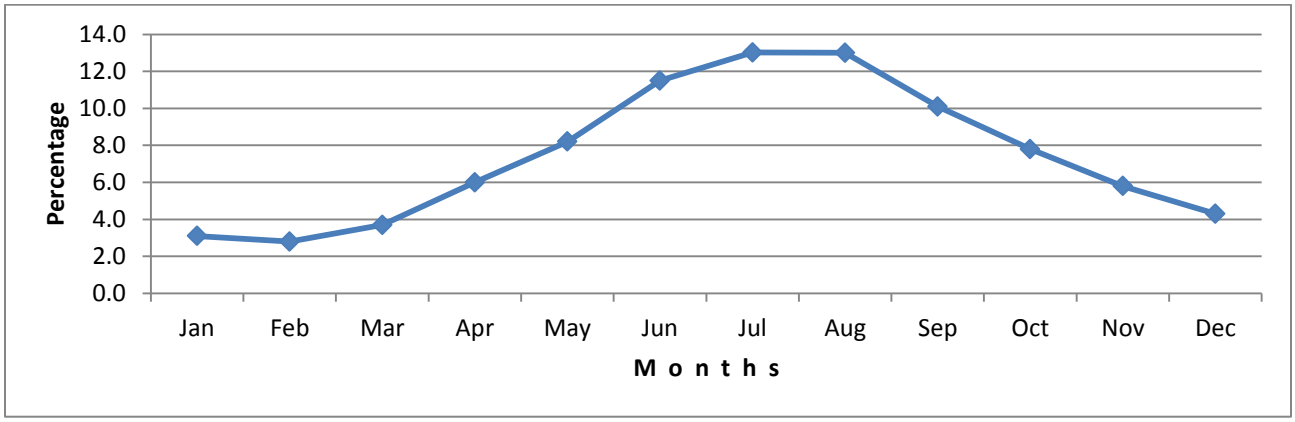
Among total ADDs, the number of AWD cases was 1,064,075(7.5% of total consultations).

Most of the cases of acute watery diarrhea have been reported among children less than five years old (62.8%). The percentage of acute watery diarrhea cases increased significantly from 6.6% in 2009 and 2010to 7.2% in 2011and to 7.5% in 2012. Around 15.2% children aged less than five years, among total consultations in this age group, consulted for acute watery diarrhea.

The high acute watery diarrhea percentages were reported from South East (9.1%), South (9.0%), and West (8.2%) regions (Table 6). While lowest percentages for AWD were reported from Central (5.7%) and Central West regions (6.5%). At provincial level, high percentages for AWD among total consultations were reported from Paktia and Samangan (11.8%), Baghlan (11.0%), Nimroz (10.6%), Nuristan (10.1%) provinces (Table 29). However, the number of AWD cases was highest in Kabul (143,693), Nangarhar (96225) and Herat (67882). The provinces with lowest percentages were Panjshir (4.6%), Bamyan, Wardak and Kabul (5.3%) and Kunar (5.6%) (Table 29 Acute Watery Diarrhea/ AWDWD cases by province)

There is a clear seasonal trend for acute watery diarrhea cases (Figure 6), with percentages increasing over the summer months, peaking in July (13.02%) and then decreasing gradually.

Figure 6: Seasonal trend of AWD cases, by month



2.3. Acute Watery Diarrhea (AWD) with Dehydration

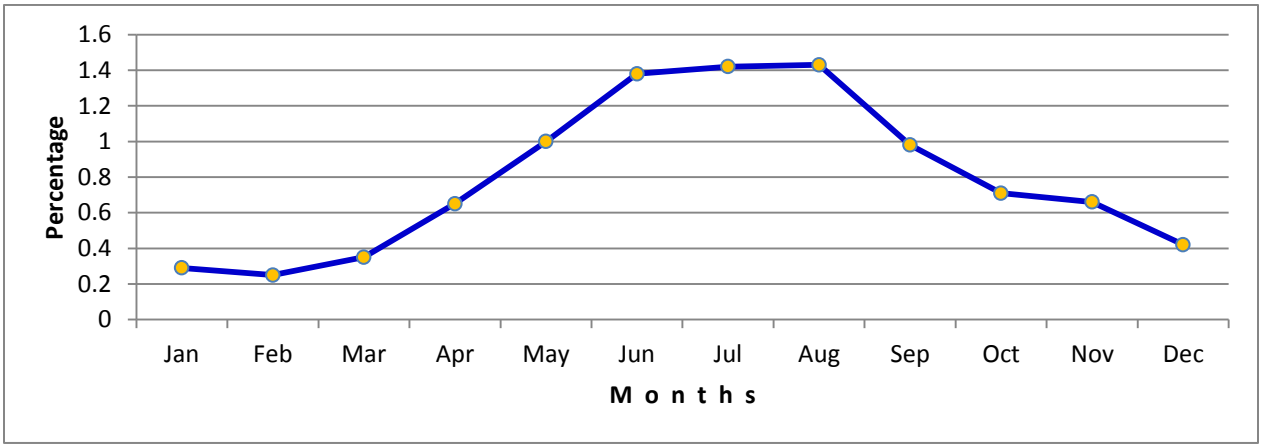
In this year, 114,372 AWD with dehydration cases were reported in all age groups accounted for 0.81% of the total consultations. Among total cases, 64.8% were reported in age less than five years. Higher percentage of AWD with dehydration was reported in children less than age of five as compared to age five and above (1.7% among total under five consultations versus

0.4%among total over five year consultations).The highest percentage (1.5%) for AWD with dehydration cases out of total consultations was reported from South and East region, followed by South East (1.0%).region. (Table7).At provincial level, high percentage of cases were reported from Uruzgan,(2.2%), Helmand and Nangarhar provinces (1.8%) each, followed by Paktya (1.4%),Kandahar (1.3%) provinces (Table 29 Acute Watery Diarrhea/ AWDWD cases by province).Figure 7 illustrates a clear seasonal trend similar to AWD with peak in summer especially in the months from July to August.

Table 7: AWD with dehydration cases by region

Region	No. of AWD with Dehydration cases	% of AWD w Dehyd cases out of total consultations
South	21118	1.5
East	33239	1.5
South East	11426	1
North East	7813	0.6
Central West	5713	0.6
Central	20755	0.6
North	9606	0.4
West	4702	0.3
Total	**114372**	

Figure 7: Seasonal trend of AWD with dehydration cases by month



In 2012, a total of 353 deaths due to acute watery diarrheal diseases (with and without dehydrations) were reported countrywide, of which 323 (91.5%) were reported in children younger than age of five years.

2.4. Acute Bloody Diarrhea

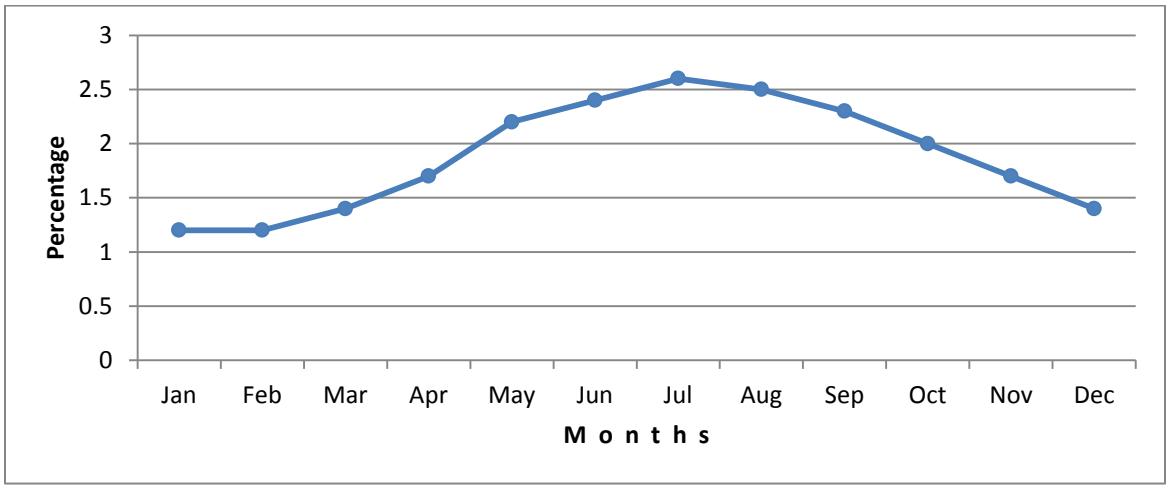
In 2012, 268,915 cases (1.9% among total consultations) of acute bloody diarrhea and 17 related deaths were reported countrywide. The percentage was the same, compared to 1.9% in 2011.In children under five years of age 2.9% of consultations (among total under five consultations) were attributed to acute bloody diarrhea while this percentage was 1.4% among age five years and above (denominator is total over five years consultations).

Table 8: Acute bloody diarrhea by region

Region	No. of acute bloody diarrhea cases	% out of total consultations
East	63506	2.8
South	34880	2.4
North	47867	2.2
South East	23647	2.2
Central West	18897	2
North East	25850	1.9
West	17733	1.2
Central	36535	1.1
Total	**268915**	

Table 8 indicates that high percentages of cases among total consultations were reported from East (2.8%), South East (2.4%), North and South East (2.2%) and North East (1.9%).Among all provinces Kandahr (4%), Nuristan (3.8%), Logar (3.6%), and Wardak (2.9%) are the provinces with highest percentage of acute bloody diarrhea cases among total provincial new consultations (Table 30).

Figure 8: Seasonal trend of acute bloody diarrhea by month



Similar to acute watery diarrheal diseases the burden of acute bloody diarrhea is high in summer months with peak in July (2.6%), (Figure-8).

2.5. Malaria

Out of total consultations percentage for reported malaria cases in Afghanistan declined substantially from 2008 onwards (Figure9). Bed net distribution program may have contributed to this reduction. The percentage remained lower at 0.49% (69,203 cases) in 2012. Among the cases, 45,707 (66%) were in age group five years and above. Malaria cases have been reported as proportion of total consultations of the relevant age group 0.5% among the age group five year and five years and above.

Table 9: Suspected malaria cases by region

Region	No. of malaria cases	% of malaria cases out of total consultations
East	39419	1.8
South East	10204	0.9
South	6782	0.5
North East	2448	0.2
North	5132	0.2
Central West	1135	0.1
West	942	0.1
Central	3141	0.1
Total	**69203**	

East (1.8%), Southeast (0.9%) and South (0.5%) were the regions with highest percentages of malaria cases among total consultations (Table9). Kunar (2.01%), Nangarhar (1.87%), Paktika (1.8%), Laghman(1.28%)and Paktya (0.99%) reported high percentages of malaria cases among total consultations, at provincial level(Table 30 Acute Bloody Diarrhea/Malaria cases by province).There is a clear seasonal trend with percentages increasing over the summer months, peaking from June to October and then decreasing gradually (Figure 10). The information on the species of malaria parasite is not collected by DEWS. A total of 40 malaria deaths were reported of which 23 were in children under the age of five. The corresponding malaria CFR was 0.58 per 1000 in 2012.

Figure 9: Percentage of malaria cases out of total consultations by year, 2008-2012

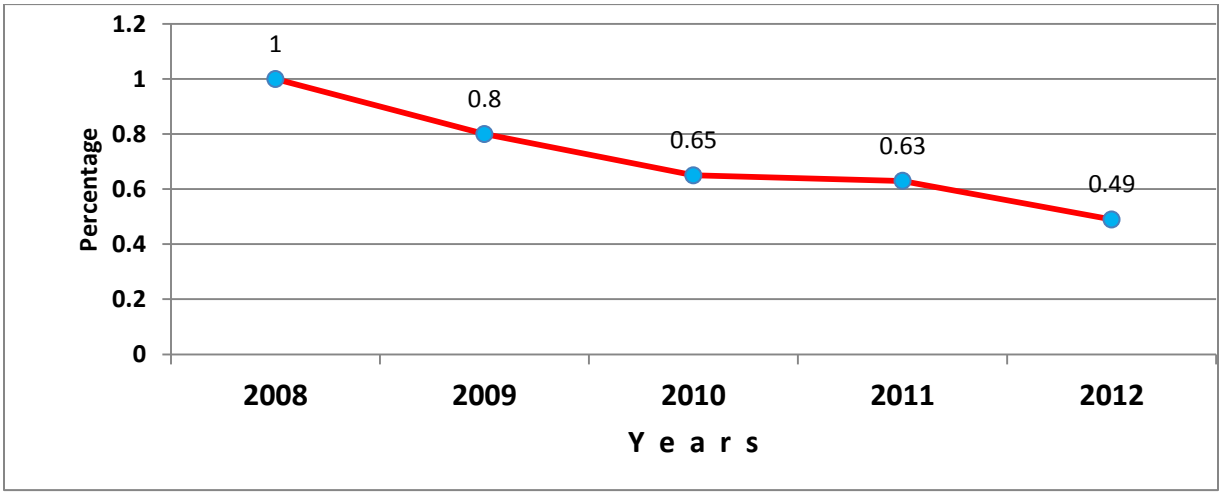
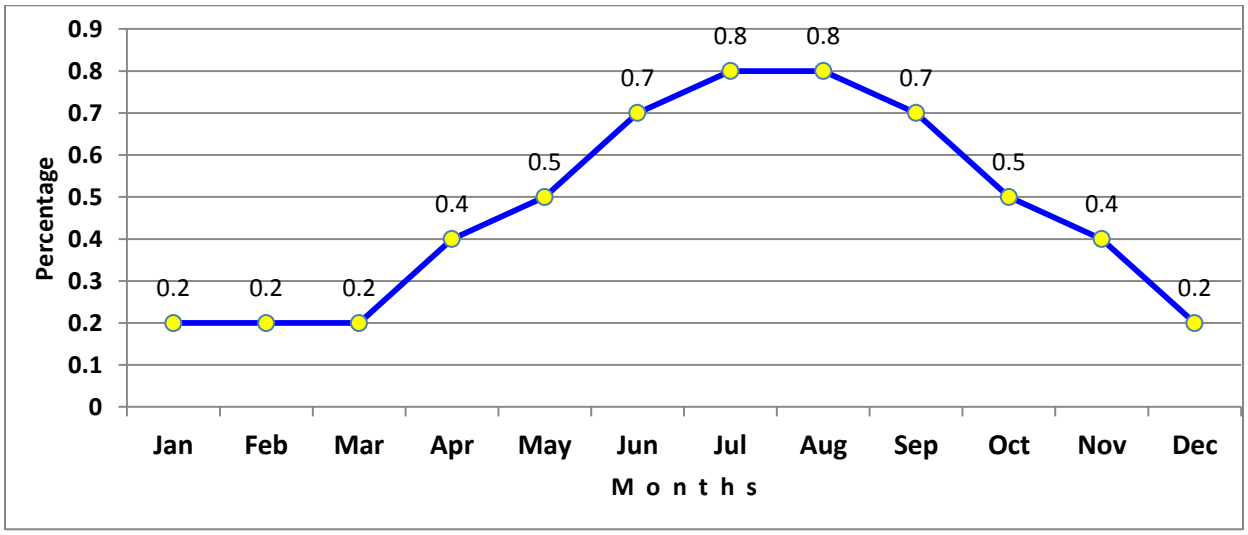


Figure 10: Malaria trend by month



2.6. Typhoid Fever

There were 74,508 cases of suspected typhoid fever notified in 2012 accounted for 0.52% of total OPD and IPD consultations. The 2012 percentage was similar to the 2011 but was less than percentage of 2009 (0.8%) and 2008 (1%). Figure 11shows the percentage of suspected typhoid fever among total consultations by year since 2008.

Figure 11: Suspected Typhoid fever by year, 2008-2012

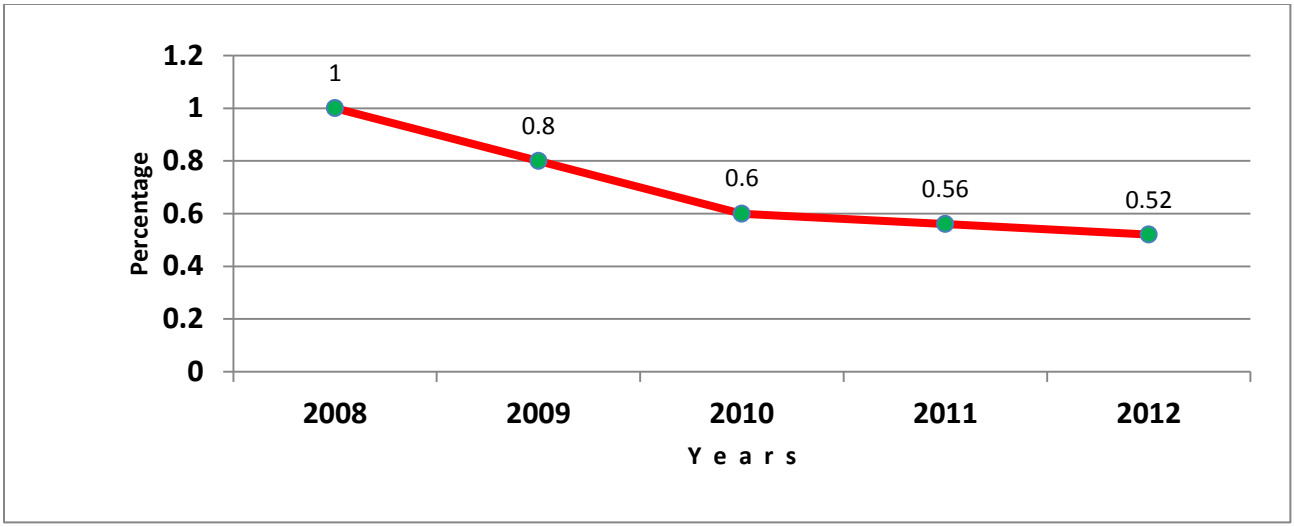


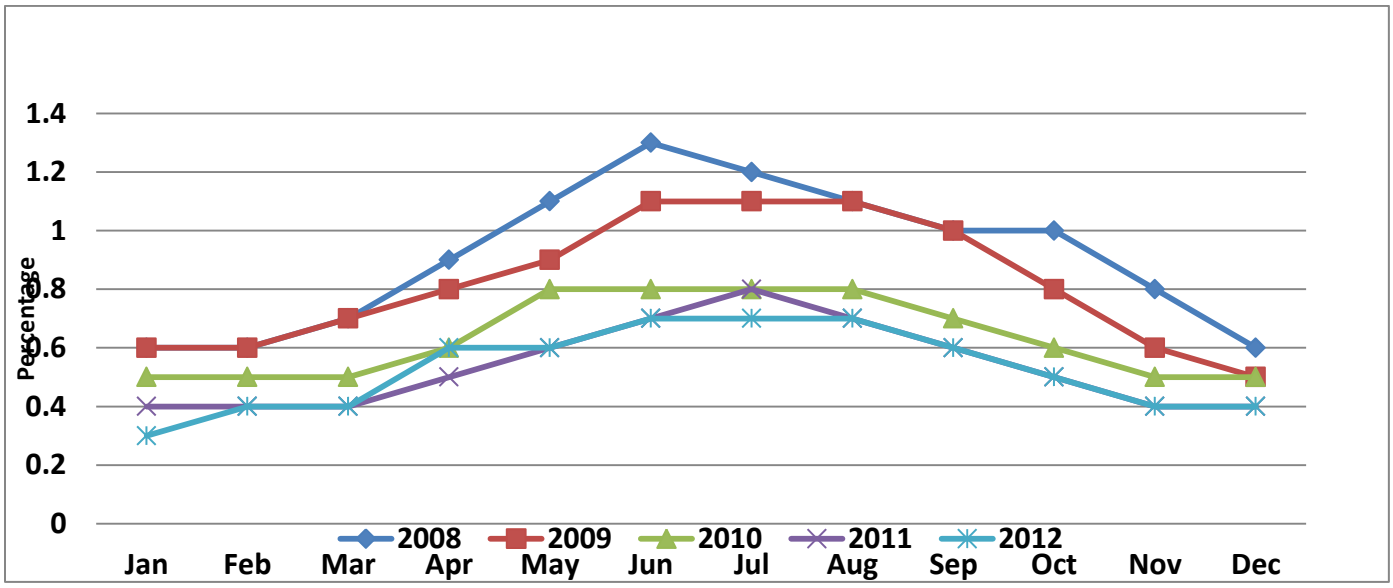
Table 10: Typhoid fever by region

Region	No. of typhoid fever cases	% of typhoid fever cases out of total consultations
South	14565	1
South East	10380	0.9
East	17333	0.8
North East	6887	0.5
North	9304	0.4
Central West	4255	0.4
West	4084	0.3
Central	**7700**	0.2
Total	**74508**	

Age was recorded for all cases. Out of total cases 60,076 (80.6%) were reported in age group five years and above. Age-specific percentage was higher in the ≥ 5 years age group (0.6%) as compared to age group <5 years (0.3%).The highest out of total consultations percentages for typhoid fever were reported from South(1.1%),South East (0.9%), and East (0.8%) regions (Table 10).At provincial level, the highest percentages were reported from Nangarhar (0.24%), Khost (0.22%), Nuristan (0.19%) and Wardak (0.14%). The percentage of reported typhoid cases in 2012 showed a peak in summer with the highest percentage in July. Similar trends were observed also in 2011 and 2010 (Figure 12).

In total 6 deaths due to typhoid fever were reported, 1 in the age group below five and 5 in age five and above.

Figure 12: Seasonal trend of typhoid fever cases by month, 2008- 2012



2.7. Meningitis/Severe Ill Child

A total of 8,119 cases of suspected meningitis/severe ill child were notified. Compared with previous years, there was slight increase in the number and percentage of cases among total consultations (0.07% in 2010, 0.05% in 2011 and 0.06% in 2012).

Table 11: Suspected Meningitis/SIC cases by region, 2012

Region	No. of suspected meningitis/SIC cases	% of suspected meningitis/SIC cases out of total consultations
North	2044	0.09
Central	2278	0.07
North East	862	0.06
West	698	0.05
South	695	0.05
Central West	466	0.05
South East	362	0.03
East	714	0.03
Total	**8119**	

The national level percentage for the cases was 0.06 % (8,119 cases) with the highest percentages being reported by North (0.09%, 2044 cases), Central (0.07%, 2278 cases),

Northeast (0.06%, 862 cases) and West (0.05%, 698 cases) regions (Table 11).Table 31 details the number of meningitis/SIC cases at provincial level. The most affected age group was the youngest (under five years) with an overall percentage of 0.11 among total under five OPD consultations compared to the age group (five years and above) with a percentage of 0.03.The large number of deaths (552) was reported due to meningitis/SIC corresponding to CFR of 68 per 1000. More deaths (383) were reported in age group less than five years.

2.8. Measles

There were 10,094(0.07%) suspected measles notifications and samples were collected for laboratory confirmation from 2,902 cases, of which 2,099 (72.3%) were laboratory-confirmed. There was a significant decrease in the number of cases from 2011 when there were 4,856 (0.04%) suspected cases. Age was recorded for all suspected cases. Majority of the cases 7269 (72.0%) were reported in age group less than five years.

The higher age specific percentage was seen in the under-five age group (0.2%), compared with age group five years and above (0.07%).

The highest percentages were reported from East (0.17%, 3797 cases), South East (0.1%, 1085 cases) and South (0.06%, 835 cases) regions (Table 12).

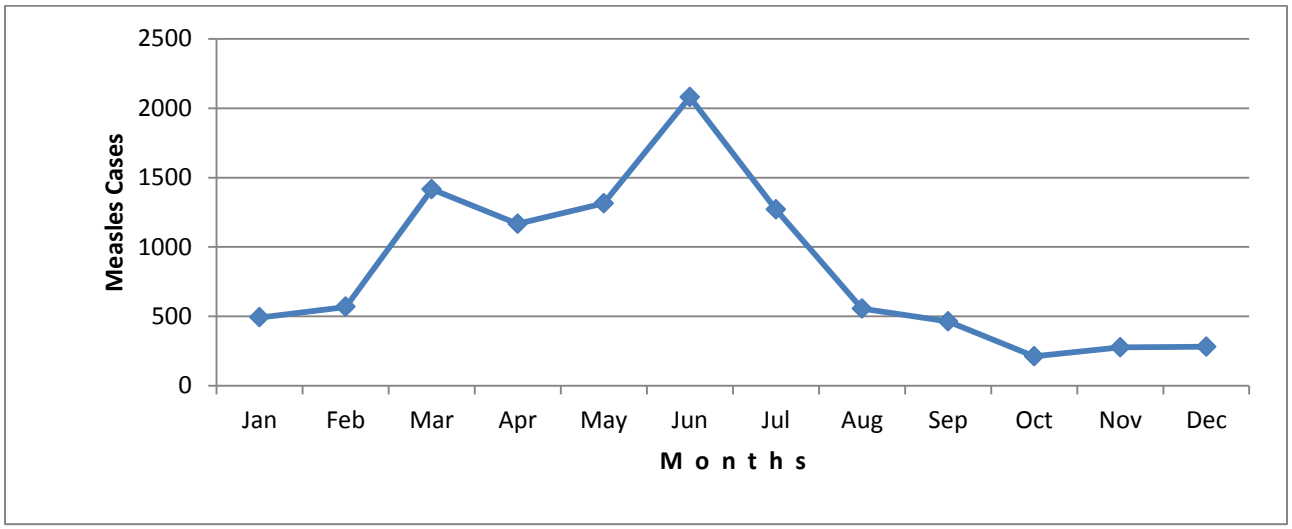
Table 12: Suspected measles cases by region

Region	No. of measles cases	% of measles cases out of total consultations
East	3797	0.17
South East	1085	0.1
Central West	605	0.06
South	832	0.06
North	1056	0.05
Central	1802	0.05
North East	582	0.04
West	335	0.02
Total	**10094**	

At provincial level, highest percentages of measles cases among total OPD consultations were reported from Nangarhar (0.24%, 3152 cases), Khost (0.22%, 532 cases), Nuristan (0.19 %, 193 cases) and Wardak (0.14%, 355 cases).Nonetheless, the high number of suspected measles cases was reported from Nangarhar (3152), Kabul (1540) and Balkh (771) provinces (Table 31).For 2012 there is a clear seasonal pattern of measles with a peak in spring/summer (March–July) and

lower cases in autumn (Figure 13). Overall 40 deaths due to measles were reported in 2012 with 38 deaths being reported in age less than five years (CFR= 5.2 /1000).

Figure 13: Seasonal distribution of measles cases



2.9. Acute Viral Hepatitis

A total of 9,454 cases (0.1%) of suspected acute viral hepatitis were reported, compared with 8, 867 cases (0.07%) in 2011 and 6,711(0.1%) in 2010. The majority of the cases were reported in the age group five years and above (72.7% of total cases). The age-specific percentage was slightly higher in age group five years and above (0.07%) than age group below five years (0.06%).

Table 13: Suspected acute viral hepatitis cases by region

Region	No. of acute viral hepatitis cases	% of acute viral hepatitis cases out of total consultations
South East	1730	0.16
East	2750	0.12
Central	2672	0.08
North East	65 5	0.05
Central West	343	0.04
West	488	0.03
South	492	0.03
North	324	0.02
Total	**9454**	

Southeast (0.16%, 1730 cases), East (0.12%, 2750 cases) and Central (0.08%, 2672 cases) regions had the highest reported cases in 2012(Table 13).Nangarhar reported the highest number of cases (2,630), followed by Kabul(2,566), Ghazni (549), Khost (484), Paktika (399), and Takhar (351).However, the highest percentages were reported from Paktika (0.20%), Nangarhar (0.20%), Khost (0.20%,) Ghazni (0.16%), and Paktia (0.10%) respectively. No seasonal pattern can be observed for acute viral hepatitis. Data on the types of viral hepatitis is not collected by DEWS through weekly surveillance system. However, data on the types of hepatitis are collected during hepatitis outbreaks.

A total of 28 deaths were reported countrywide corresponding to case-fatality rate of 2.96 deaths per 1000 cases at national level. More deaths (17 deaths, 61%) were reported inage group five years and old.

2.10. Pertussis

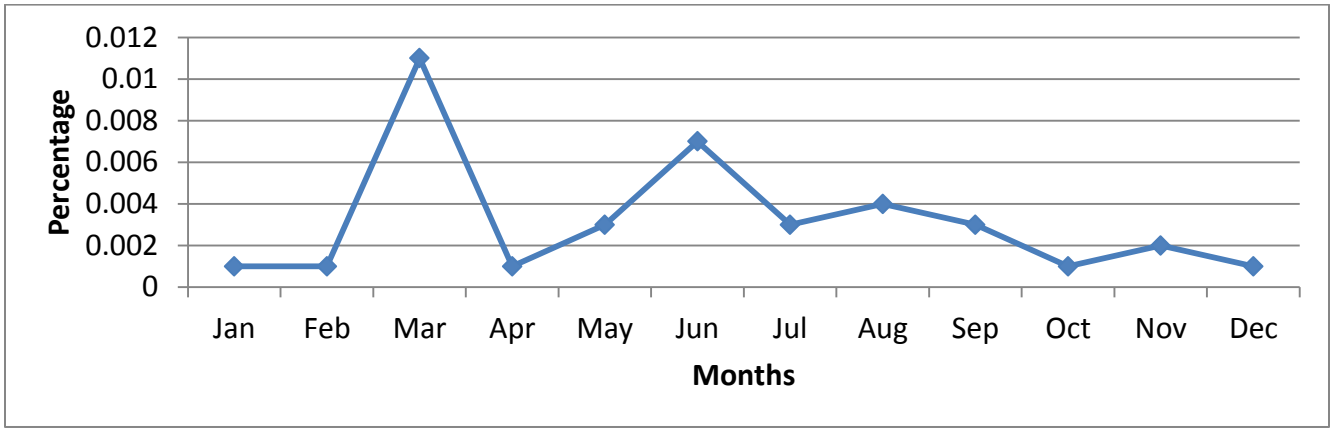
A total of 475 suspected pertussis cases were reported in 2012, compared with 438 cases in 2011. The slight increase in the number of cases could be explained by the expansion of the sentinel sites. Among total cases, 293 (61.7%) were reported in age group less than five years.

The highest number for pertussis cases was reported from Central region (127 cases), followed by North East (112cases), North (90cases), and South (55cases) regions. Table 14 shows the number of suspected pertussis cases at provincial level. In 2012; out of total OPD percentages for pertussis were higher during spring and summer (Figure 14). No deaths due to pertussis were reported in 2012.

Table 14: Provinces with reported number of suspected pertussis cases

S.No	Province	No. of Suspected pertussis cases	S.No	Province	No. of Suspected pertussis cases
1	**Kabul**	127	13	**Kandahar**	6
2	**Badakhshan**	81	14	**Khost**	6
3	**Balkh**	62	15	**Bamyan**	4
4	**Nangarhar**	51	16	**Ghazni**	3
5	**Hilmand**	39	17	**Hirat**	3
6	**Faryab**	28	18	**Paktika**	3
7	**Takhar**	12	19	**Panjsher**	3
8	**Kunduz**	11	20	**Uruzgan**	3
9	**Paktya**	8	21	**Parwan**	1
10	**Baghlan**	8	22	**Badghis**	1
11	**Logar**	7	23	**Kunar**	1
12	**Zabul**	7	**Total**		**475**

Figure 14: Seasonal distribution of suspected pertussis cases



2.11. Diphtheria

A total of 16 probable diphtheria cases were reported countrywide in 2012 through sentinel sites. The number of this rare disease with epidemic potential is more than that for the last two years (2011: 15 cases, 2010: 10 cases). More than half of the cases were reported in the age group less than five years, 9 cases (56.2%).The majority of cases were reported by Northeast (8), Central3), and South (2) regions. Two cases were reported from East while North reported one diphtheria case in 2012. Table 15 shows the distribution of the probable diphtheria cases at provincial level. No seasonal trend can be observed from the small number of cases. No deaths due to diphtheria have been reported in 2012.

Table 15: Distribution of the probable diphtheria cases by province

Province	No. of probable diphtheria cases
Kabul	3
Kandahar	2
Takhar	1
Balkh	1
Nangarhar	1
Kunar	1
Total	**9**

2.12. Tetanus/ Neonatal Tetanus

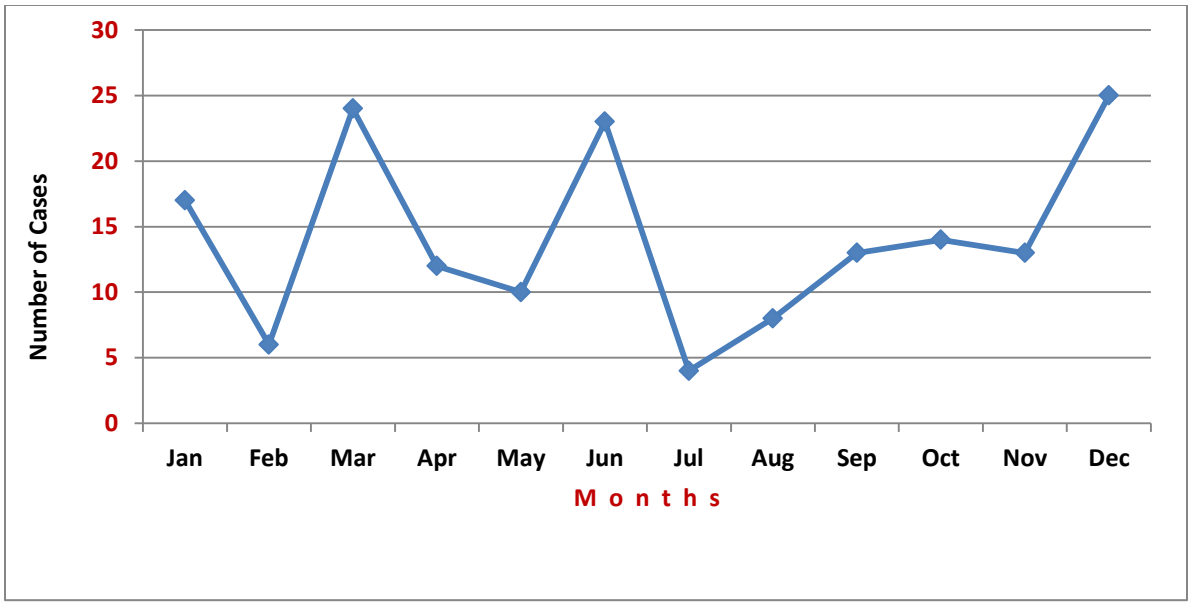
In 2012, 166 suspected cases were reported countrywide from the sentinel sites. This is a significant increase from the 124 cases reported in 2011. The most affected age group was the children under the age of five with 113 (67.4 %) from the 166 reported cases. Data on vaccination status are not collected and analyzed by DEWS.

Table 16: Number of Tetanus/ Neonatal Tetanus cases by districts

S.No	District	TT Cases		District	TT Cases
1	Lashkar Gah	79	13	Balkh	1
2	Jalalabad	20	14	Nahr -i- Sarraj	1
3	Kabul	18	15	Qalat	1
4	Kandahar	17	16	Qarqin	1
5	Mazari Sharif	5	17	Yakawlang	1
6	Hirat	4	18	Puli Khumri	1
7	Khost(Matun)	2	19	Saghar	1
8	Shibirghan	2	20	Teyora	1
9	Taluqan	2	21	Dihrawud	1
10	Kunduz	2	22	Dara-I-Pech	1
11	Mir amor	2	23	Shinwar	1
12	Farah	2	Total		166

The highest number of cases was reported by Lashkargah (79 cases) followed by Jalalabad (20 cases), Kabul (18 cases), Kandahar 17 cases), Mazar-i-sharif 5 cases and Hirat (4 cases). . Table 16 details the locations of the cases and the number of suspected cases. A peak of tetanus cases is clearly evident in March, June and December (Figure 15).A total of 30 deaths due to tetanus were reported with corresponding case-fatality rate of 225 per thousand. Among deaths, 29 reported in age group less than five years.

Figure 15: Seasonal trend of tetanus/neonatal tetanus cases, by month



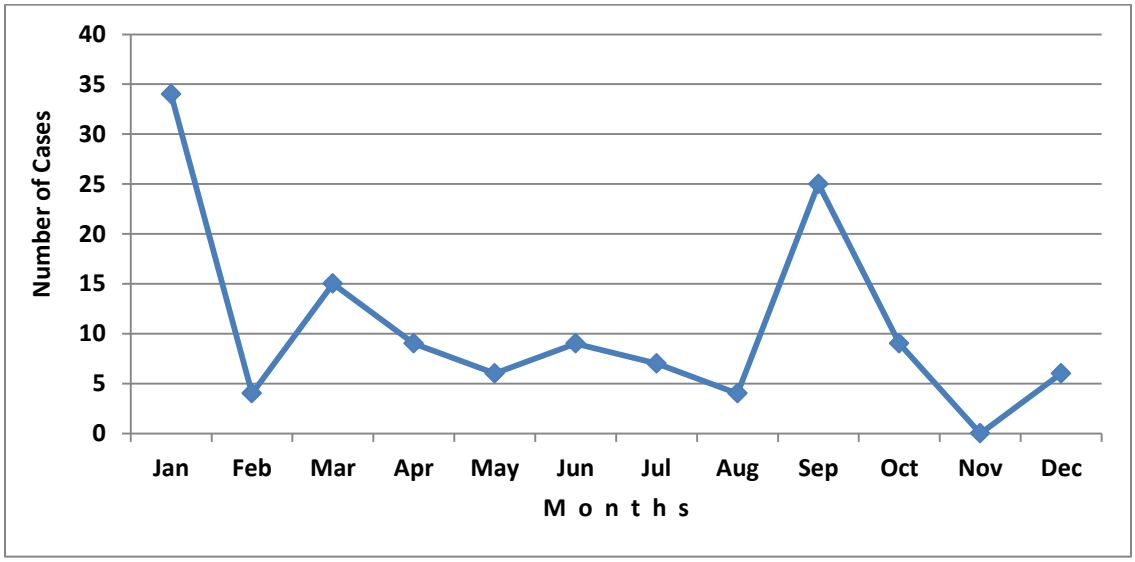
2.13. Hemorrhagic Fever

In this year, 128 reports of suspected hemorrhagic fever were received from all over the country as compared with 357 cases in 2011, 568 cases in 2010.Among total cases in 2012, 109 (85%) were reported in age group five years and above. High numbers of cases were reported from Central (28 cases), South (24 cases), South East (23 cases) and West (18 cases) regions (Table 17). Table 32 shows the provincial distribution of the suspected hemorrhagic fever in 2012.The Majority of cases, 74(58%) were reported in January, March and September (Figure 16). There were three deaths due to hemorrhagic fever reported in 2012.

Table 17: Number of suspected hemorrhagic fever cases by region

Region	No. of Hemorrhagic Fever cases
Central	28
South	24
South east	23
West	18
Central west	14
North	11
East	6
North east	4
Total	**128**

Figure 16: Number of reported hemorrhagic cases, by month



3. Outbreak detection, verification, investigation and response

The outbreaks detection, verification, investigation and responses incorporated and carried out through Indicator based surveillance and disease & event alert notification mechanism established. Below both mechanisms are explained.

Indicator based surveillance within the national surveillance system for 15 priority and targeted diseases that collect data on weekly basis. Based on analysis the surveillance system investigates the alerts reported by focal points in sentinel sites (selected public health facilities), other public and private health facilities, community and local government officials. The system investigates the alerts and provides initial response to the disease outbreaks and shares the preliminary information at earliest with potential stakeholders. Besides other investigation steps, if necessary, samples are collected from the suspected cases and send to Central Public Health Laboratory (CPHL) for laboratory confirmation. The final outbreak report is prepared by investigation and response team and shared with central DEWS department through regional DEWS coordinators. All the outbreaks data are collated and analyzed by DEWS department, MoPH.

This report contains an analysis of data on outbreaks reported between 1st January and 31stDecember 2012. The available outbreak data are restricted to the outbreaks reported to DEWS. Outbreaks are more likely to be reported if they involve unusual event, a large number of cases and/or deaths, existing of active reporting channels and from area with better security situations. The differing accessibility to the health care facilities may also impact on outbreak reporting. For these reasons caution is advised when interpreting the data contained in this report.

3.1. Outbreaks in 2012

There were 325 outbreak alerts reported and investigated and clinically or laboratory confirmed in 2012. A total of 9,772 cases were associated with outbreaks with an average of almost 30 cases per outbreak. However, the size of the outbreaks ranged from one case to 1316 cases in Brucellosis outbreak in Bamyan. Samples from the 296 outbreaks were collected for the laboratory confirmation in 2012. The highest number of outbreaks (66) was reported from South East region that represents 20.3 % of all outbreaks in 2012.South region reported the second highest number of outbreaks, 62 (19.1%) followed by East with 48 outbreaks (14.8%), while the lowest number of outbreaks, 23(7.1%) was reported from North East region.(Table 18).

At provincial level, highest number of the outbreaks were reported from Hirat province (10.5%, 34 outbreaks) followed by Paktia (8.3%, 27 outbreaks), Nangarhar (8%, 26 outbreaks) and Kandarhar (7.1%, 23 outbreaks). One outbreak was reported from Panjshir and no outbreak was reported from Farah province during 2012 (Table 33).

The complete list of outbreaks by province and district can be seen in Annex 2.

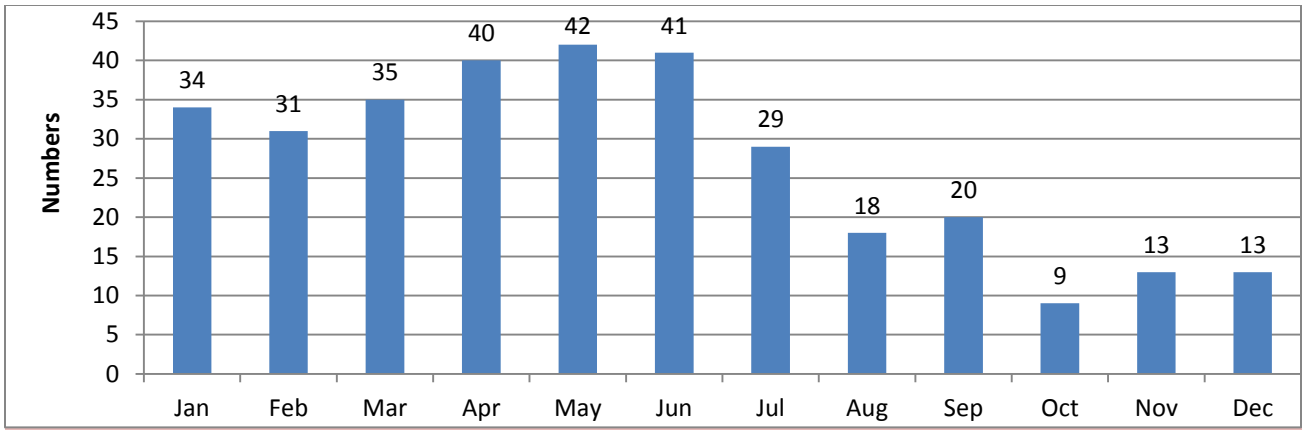
Table 18: Outbreaks and associated cases by region

Regions	No. of Outbreaks	Percentage	No. of Cases	Percentage
South	62	19.1	1075	11.0
Central	28	8.6	1226	12.5
East	48	14.8	993	10.2
North	26	8.0	256	2.6
North East	23	7.1	991	10.1
South East	66	20.3	1369	14.0
West	46	14.2	1818	18.6
Central West	26	8.0	2044	20.9
Total	325	100	9772	100

In 2012, the number of monthly outbreaks ranged from 9 (in October) to 42 (in May), with an average of 27outbreaks per month (almost one outbreak per day). And overall, most outbreaks were reported in summer season (Figure 17).

The increase in number of outbreaks during months of April, May and June is due to a seasonal effect; as respiratory diseases and water-borne diseases occur during this period. In some parts of the country cold weather exist hence ARI occurring and in other parts where weather gets warmer ARI coming to decline and water-borne diseases (especially Cholera) start an overall rise in occurrence. Measles outbreaks that consists huge proportion of total outbreaks (65.5%) occurring in spring are also contribute into increased number of total outbreaks in spring.

Figure 17: Outbreaks by month



The most common causal agent for the outbreaks in 2012 was measles virus, which resulted in 65.5% (213) of total outbreaks. The next most common causal agent associated with outbreaks was CCHF for 9.2% (30) of all outbreaks. Outbreaks due to Pertussis and Scabies had the third 8.0% (26) and fourth 3.7% (12) highest numbers respectively (Table 19).

Table 19: Reported outbreaks by disease

Disease	No. of outbreaks	% of outbreaks
Measles	213	65.5
CCHF	30	9.2
Pertussis	26	8.0
Scabies	12	3.7
Food poisoning	10	3.1
Malaria	7	2.2
Pneumonia	4	1.2
Acute Gastroenteritis	4	1.2
Cholera	3	0.9
Acute Viral Hepatitis	3	0.9
ARI	3	0.9
Leishmaniasis	2	0.6
Brucellosis	2	0.6
Chicken Pox	1	0.3
Diphtheria	1	0.3
Influenza A(H1N1)	1	0.3
TineaCapitis	1	0.3
Meningitis	1	0.3
Mumps	1	0.3
Typhoid fever	0	0.0
Rabies	0	0.0
Total	325	100

3.2. Measles outbreak

The most common outbreak in 2012 was due to Measles (213 outbreaks), accounted for65.5 % of all outbreaks associated with 3,389 measles cases. There was a 45.8% increase in the number of Measles outbreaks compared to those reported during 2011. Measles cases were confirmed by laboratory testing. Out of 2902 specimen tests, 72.3% were positive for measles. Cases were labeled confirmed with positive serologic test for Measles IgM antibody. Samples were not collected for laboratory testing if outbreaks occurred in insecure and most remote areas. Southeast region reported 59 Measles outbreaks, (27.7%) of all Measles outbreaks. Table 20 shows the regions with the number of reported Measles outbreaks. At provincial level high number of Measles outbreaks was reported from Paktika (24 outbreaks), Nangarhar, Paktya (21outbreaks from each), Takhar (16 outbreaks), Kandahar and Oruzgan (12 outbreaks from each) and Zabul (13 outbreaks) provinces (Table 34).Most of the Measles outbreaks (65.2%) were reported in the first five months of the year with peak in April (34 outbreaks) and May (29 outbreaks).

Table 20: Number of measles outbreaks by region

Regions	No. of measles outbreaks	% of measles outbreaks
South East	59	27.7
South	42	19.7
East	36	16.9
West	20	9.4
North	16	7.5
Central West	15	7.0
Central	13	6.1
North East	12	5.6
Total	**213**	**100**

3.3. CCHF Outbreaks

After Measles, CCHF is the second disease with highest number of outbreaks in 2012. From all regions 30 outbreaks were reported and highest number of outbreaks reported from West region with 18 outbreaks (60%), South region 6 outbreaks (20%) and followed by North region with 3 outbreaks (10%), whereas no outbreak reports received from three regions namely Central West, Central and North East regions (Table-21).

Table 21: Number of CCHF Outbreaks by Region

Regions	No. of CCHF Outbreaks	Percentage
West	18	60.0
South	6	20.0
North	3	10.0
East	2	6.7
South East	1	3.3
North East	0	0.0
Central	0	0.0
Central West	0	0.0
Total	30	100

3.4. Pertussis outbreak

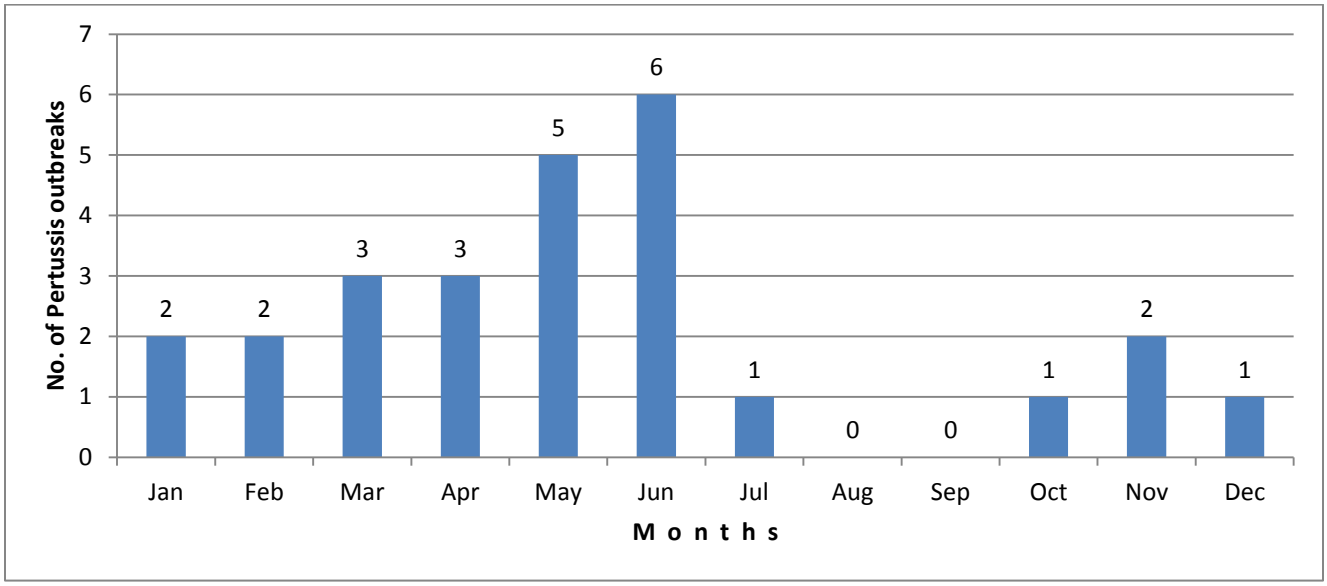
Pertussis outbreak was the third most common outbreak countrywide in 2012 with 26 outbreaks and 1280 associated cases. All the outbreaks were clinically confirmed. There was a decrease of 40% in pertussis outbreaks in 2012 as compared to 2011. Most of the outbreaks were reported from the South (8 outbreaks), North East (6 outbreaks), and West (4 outbreaks) regions (Table 22).Pertussis outbreaks by Province can be read in (Annex-2, Table-35)

Table 22: Number of pertussis outbreaks by region

Regions	No. of Pertussis outbreaks	% of Pertussis outbreaks
South	8	30.8
North East	6	23.1
West	4	15.4
North	3	11.5
South East	2	7.7
Central	2	7.7
Central West	1	3.8
East	0	0.0
Total	26	100

Most of the outbreaks (60.5%) were notified during March to June with peak in June, 6 outbreaks (Figure 19).

Figure 18: Pertussis outbreaks by month



3.5. Scabies

In 2012 a total of 12 outbreaks of Scabies with associated 1160 cases were reported from all DEWS sentinel sites. Table 23 indicates all Scabies outbreaks and associated cases by region.

Table 23: Number of Scabies outbreaks and associated cases by region

Regions	No. of Outbreaks	Percentage	No. of Cases	Percentage
Central	4	33.3	107	9.2
North East	3	25.0	316	27.2
East	2	16.7	28	2.4
South	1	8.3	220	19.0
North	1	8.3	67	5.8
West	1	8.3	422	36.4
South East	0	0.0	0	0.0
Central west	0	0.0	0	0.0
Total	12	100	1160	100

3.6. Food Poisoning Outbreaks

Food poisoning outbreak was the fifth most common outbreaks countrywide in 2012 with 10 outbreaks and 1303 associated cases, Table 24 shows the no, of outbreaks and the associated cases on food poisoning by region.

Table 24: No. of Food Poisoning outbreaks and associated cases by region

Regions	No. of Outbreaks	Percentage	No. of Cases	Percentage
South	4	40.0	109	8.4
South East	3	30.0	389	29.9
Central	2	20.0	682	52.3
East	1	10.0	123	9.4
Total	10	100	1303	100

4. Laboratory Report

Central Public Health Laboratory (CPHL), a national reference laboratory, supports the surveillance/DEWS program in confirmation of the suspected outbreaks detected countrywide. In 2012, the laboratory performed a total of 4,940 tests of specimens received from all the DEWS regions. The number of specimens examined for Measles remained highest at 2,902 or 58.7 % of total specimens. Among all2, 205 positive specimens, 2099 were positive for Measles, 92 for Rota virus, Zero for Cholera and the rest for CCHF, Brucellosis, HBV, Influenza, and ABD. Table 25 details the number of tested and positive specimens by region and diseases.

Table 25: Number of investigated and positive specimens by region and disease

Region	No. of specimens/positive	Measles	Rota virus	Cholera	CCHF	HBV	Total
East	No. of specimens	614	110	19	1	3	747
	No. tested positive	456	40	0	0	2	498
South	No. of specimens	192	0	3	0	0	195
	No. tested positive	126	0	0	0	0	126
South East	No. of specimens	221	0	10	4	12	247
	No. tested positive	154	0	0	0	0	154
Central	No. of specimens	584	0	7	0	10	601
	No. tested positive	423	0	0	0	2	425
West	No. of specimens	333	119	0	25	0	477
	No. tested positive	253	54	0	9	0	316
North	No. of specimens	337	0	3	8	0	348
	No. tested positive	273	0	0	1	0	274
Central West	No. of specimens	276	0	4	0	0	280
	No. tested positive	171	0	0	0	0	171
North East	No. of specimens	345	0	8	2	0	355
	No. tested positive	243	0	0	0	0	243
Total	**No. of specimens**	**2902**	**229**	**54**	**40**	**25**	3250
	No. tested positive	**2099**	**92**	**0**	**10**	**4**	2205

5. Daily Emergency Report

All the country including 34 provinces is under the coverage of Codan Radio System used for communicating daily emergency health related events. The system was first established and equipped by WHO inside the ministry of public health and in eight regions in the year 2003. The system is governed by Central Codan Department located in the ministry of public health and receives daily reports from all over the country. All the received information is then shared with the surveillance directorate.

The role of Codan department at a national level includes;

- Receiving outbreak reports from the provinces
- Receiving seasonal diseases reports from all provinces
- Receiving daily reports on natural disasters, explosions, traffic accidents, and other criminal events
- Send and receive the official letters and documents from all provinces
- Sharing the information with other relevant directorates of the ministry of public health

Table 26: shows the reported No. of injuries and deaths due to various unpleasant events in 2012.

Regions	Explosion		Burns		Criminal Events		Traffic accidents		Other Events	
	Injuries	Death	Injuries	Death	Injury	Death	Injuries	Death	Injuries	Deaths
Central	211	45	4405	0	8565	60	12733	39	12733	39
East	398	43	552	1	1662	39	2721	11	2721	11
North	369	124	1785	12	2989	139	5504	195	5504	195
North-East	102	16	926	4	6422	92	3296	70	3296	70
South	1638	408	1735	24	3477	347	9327	267	9327	267
South-East	281	66	103	0	1027	162	1832	147	1832	147
West	176	60	4903	5	6050	108	11444	85	11444	85
Central-West	208	15	1379	0	1342	74	2709	88	2709	88
Total	3383	777	15788	46	31534	1021	49566	902	49566	902

6. Capacity Building- Health System Strengthening

In addition to the early detection and response to the outbreaks, health system strengthening through providing quality trainings in laboratory procedures, epidemiology and other public health disciplines is one of the core objectives of DEWS. Trainings at various levels

(international and national) have been provided to the DEWS team in 2011. The details of the all trainings have been provided below;

6.1. International Trainings

- Distance MPH course for 12 MoPH staff in Judah- Pur University (India)
- IHR online course for 2 MoPH staff
- Participation of DEWS staff in different inter-country meetings.
- Environmental sampling course for 60 DEWS staff.
- TOT on Measles operational guidelines for EPI, CDC, DEWS and Polio.
- Training on Measles operational guidelines for EPI, CDC, DEWS and Polio.

6.2. National level Trainings

- Outbreak Investigation and Response Training for provincial DEWS and CDC officers, WHO polio staff and NGOs
- Water Quality Testing Training for DEWS and CDC provincial officers
- 6 Coordination meetings and DEWS refresher trainings
- Rapid response team training for 5 DEWS staff in Amman, Jordan
- Advance rapid response team training for 2 DEWS staff in Amman, Jordan

6.3. Tools, Guidelines and SOPs

In 2012, most of the DEWS existing tools were revised, some operational guidelines and first draft of Policy and Strategy of Surveillance/DEWS were developed. DEWS tools include outbreak investigation form, DEWS weekly surveillance form, Measles case reporting form, Codan daily reporting form, outbreak line list form, Lab request form, Influenza Lab request form and Influenza surveillance forms. Operational guidelines for Cholera and Measles epidemic response were newly developed.

Existing guidelines include DEWS Manual containing guidelines for 28 diseases on surveillance and response to outbreaks, fact sheets for health workers, health education material for each disease, Measles surveillance and response Guideline, influenza surveillance guidelines, toolkit for early detection and response to outbreaks of Influenza A(H1N1) and toolkit for early detection and control of human cases of Avian Influenza.

7. DEWS indicators

Table 27 indicates DEWS achievements based on the seven indicators on quarterly base for the whole year as well as the average calculation of the indicators, baseline at 2007 and target.

Table 27: DEWS achievements based on the indicators

S.No	Indicator	Q1	Q2	Q3	Q4	Total /Average	Base line 2007	Target
1	Percentage of weekly report arrived from sentinel sites to national level timely	99.8%	99.7%	99.9%	99.8%	**99.8%**	100%	>90%
2	Percentage of timely compilation, analysis and dissemination of weekly report at the national level	100.0%	100.0%	100.0%	100.0%	**100.0%**	95%	>90%
3	Percentage of outbreaks investigated within 48 hours of notification	97.2%	100%	98.5%	97.4%	**98.24%**	80-90%	>90%
4	Percentage of attendance of DEWS in monthly PHCC meetings	95.92%	97.94%	98.95%	98.95%	**97.94%**	NA	>90%
5	Number of DEWS coordination meeting hold at the national level	1	1	1	1	**4**	11	6
6	Percentage of serum specimens collected for measles/Rubella reached to CPHL in good condition (Adequate specimen)	96.5%	97.7%	95.0%	97.5%	**96.6%**	61%	>80%
7	Number of specimen confirmed by reference laboratory	20	20	20	40	**100**	NA	>10%

Conclusion

This report concludes that communicable diseases are still major health threatfor the people of Afghanistan. Communicable diseases represent the larger portion of the OPD and IPD consultations that most of them can be easily prevented by cheaply available vaccines. For certain diseases there has been somere duction in the incidence and number of cases through concerted prevention and control strategies. The current high numbers of infectious diseases cases, outbreaks and deaths illustrate the need for research in local perspectives on the determinants of health and disease in the country. The current high burden of communicable diseases in Afghanistan may largely be due to the armed conflict, damaged health infrastructure, insufficient skilled health staff, poverty, illiteracy, inadequate housing and poor environmental conditions. Malnutrition in children less than five years old also plays an important role in sufferings from most communicable diseases. Inequity in health along is crucial impendent in combating the infectious disease. Inaccessibility to the primary health care and weak referral system also contribute to the persistence of the communicable disease. Children less than five years old accounted for more than half of the reported cases for the majority of the DEWS targeted diseases.

Annexes

Annex1: Weekly Report Format and Case Definitions

Weekly Report Format

Surveillance Reporting Form for Morbidity and Mortality

Province Name/Code: District Name/Code:

Town/Village/Camp: Facility Name/Code: NGO/Donor:

Epidemiological Week___ from Saturday: _____/_____/ to Friday____/____/2011 Submission
Date: ___/____/____ Contact's Name & phone #…

Disease/Condition		<5 years				≥5 years			
		Male		Female		Male		Female	
		Case	Death	Case	Death	Case	Death	Case	Death
1	ARI- Cough and cold								
2	ARI- Pneumonia								
3	Acute Watery Diarrhea								
4	Acute Bloody Diarrhea								
5	AWD w Dehydration								
6	Susp. Meningitis /SIC								
7	Susp. Acute Viral Hepatitis								
8	Susp. Measles								
9	Susp. Pertussis								
10	Probable Diphtheria								
11	Tetanus/ Neonatal Tetanus								
12	Acute Flaccid Paralysis								
13	Susp. Malaria								
14	Susp. Typhoid Fever								
15	Susp. Hemorrhagic Fever								
16	Pregnancy-related deaths								
	DEWS Disease								
TOTAL New Clients/ Deaths									

- Please include only those cases that were examined / admitted during the surveillance week and deaths that occurred during the surveillance week. Each case should be counted only once.
- Write "0" (zero) if you had no case or death of any of the Health Events listed in the form.
- Deaths should be reported only under "Deaths", NOT under "Cases", and please fill the following table for each reported death.

S.N.	Name	Age	Sex	Cause	Residence/ Address
1					
2					
3					

Case Definitions

1. **Cough and Cold:** Acute onset of cough, cold, coryza (runny nose), pharyngitis, laryngitis, bronchitis, or bronchiolitis with or without fever.

   Influenza-Like Illness (ILI): Acute onset of fever >38deg C. with cough and/or sore throat. Patient should have measurable fever when sample is taken.

   Suspected Avian Influenza: Influenza-like illness in person who has had contact with birds/poultry in previous week, especially living or visiting an area with sickness or death in poultry.**Confirmed case**: Throat swab positive for H5 avian influenza.

2. **Pneumonia:** In adults:fever and crepitation or bronchial sounds on chest auscultation. In children <5 years old, cough with chest indrawing and/ or fast breathing: More than:

   60/min in infants <2 months, 50/min in infants 2-12 months, 40/min in children > 1 year.

3. **Acute Watery Diarrhea:**Three or more abnormally loose or fluid stools in the past 24 hours with or without fever or mucous, but without dehydration.
4. **Acute Bloody Diarrhea (Dysentery):** Acute Diarrhea with visible blood in the stool.

   Suspected Shigellosis: Bloody diarrhea, fever, stomach cramps in 5 or more connected cases.**Confirmedcase:**Isolation of *Shigelladysenteriae*type 1 in stool sample.

5. **Acute Watery Diarrhea with dehydration:** Acute or Bloody Diarrhea with dehydration.

   Suspected Cholera: Anyone over 5 years old with severe dehydration or death from acute watery diarrhea with or without vomiting.**Confirmed case:** Isolation of *Vibrio cholera* O1 Inaba or 01 Ogawa or O139 from diarrheal stool sample.

6. **Suspected Meningitis:** Sudden onset of fever (>38.5) with stiff neck, and altered consciousness or other meningeal sign or petechial or purpural rash. See HMIS definition of Severely Ill Child (SIC). Signs of suspected meningitis in infants are fever and bulging fontanelle.
7. **Suspected Acute Viral Hepatitis:** Illness with acute onset of yellow skin and conjunctiva (jaundice), dark urine, and fatigue. Also anorexia, nausea, malaise, and right upper quadrant tenderness.
8. **Suspected Measles:** Maculopapular rash for at least 3 days, with fever and cough, runny nose or conjunctivitis or any person in whom a clinician suspects measles infection. **Confirmed case:** Suspected case with positive serum IgM and no measles vaccination in prior 28 days.
9. **Suspected Pertussis**: A person with a cough lasting at least two weeks with one of the following: Paroxysms (i.e. fits) of coughing; or inspiratory “whoop”; or post-tussive vomiting (i.e. vomiting immediately after coughing) AND without other apparent cause.
10. **Probable Diphtheria**: An acute illness characterized by an adherent membrane on the tonsils, pharynx and/ or nose and any one of the following: laryngitis, pharyngitis or tonsillitis.
11. **Tetanus:** One or more of the following signs: Trismus of the facial muscles (masseter) and neck/ risussardonicus, painful muscular contractions.

    Suspected Neonatal Tetanus: Any neonatal death between 3-28 days of age in which the cause of death is unknown or not investigated.**Confirmed:** Any neonate with a

normal ability to suck and cry during the first two days of life, and who between 3 and 28 days of age cannot suck normally and becomes stiff and/or has convulsions.

12. **Acute Flaccid Paralysis:** Sudden floppy paralysis in a child aged < 15 years, including GuillainBarré syndrome, or any person with paralytic illness at any age when polio is suspected.
13. **Suspected Malaria:** Fever or history of fever >38°C within the last 48 hours with at least one other symptom: chills, sweats, nausea, vomiting, headache, back pain, or myalgia. In uncomplicated falciparum malaria, diarrhea and cough are common.
14. **Suspected Typhoid Fever:** Continuous high fever with any of the following: relative bradycardia, rose spots, prostration, diarrhea or constipation, abdominal pain, splenomegaly, or leucopenia and positive Widal test on the 8^{th}-10^{th} day.
15. **Suspected Acute Hemorrhagic Fever:** Acute febrile illness of more than 72 hours and less than 10 days duration and any two of the following: Thrombocytopenia less than 100,000 / mm3, petechial or purpuric rash, epistaxis, hematemesis, hemoptysis, blood in stools, ecchymosis, gum bleeding, other hemorrhagic symptom AND no known predisposing host factors.
16. **Pregnancy-related Death:** Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Total New Clients: This is taken directly from the HMIS Tally Sheet and is used as a proxy for the population denominator when calculating rates.

Annex-2: Supplementary data

Table 28: Cough and Cold/Pneumonia cases by province

No. of cough and cold cases and its percentage of total consultations			No. of Pneumonia cases and its percentage of total consultations		
Province	**Cases**	**Percentage**	**Province**	**Cases**	**Percentage**
Kapisa	58787	27.1	**Sari Pul**	22967	8.7
Logar	82635	25.9	**Jawzjan**	42897	8.6
Nuristan	25137	25.3	**Baghlan**	19871	7.0
Khost	59382	24.2	**Nuristan**	5391	5.4
Kunar	122994	24.1	**Bamyan**	11554	5.0
Daykundi	55986	22.8	**Samangan**	12830	4.8
Faryab	109627	22.0	**Laghman**	15449	4.8
Nangarhar	276908	21.3	**Balkh**	27989	4.5
Paktya	65157	21.2	**Wardak**	11096	4.3
Balkh	126148	20.2	**Logar**	12941	4.0
Wardak	51661	20.2	**Badakhshan**	16102	4.0
Baghlan	55391	19.5	**Takhar**	15013	3.9
Hirat	160050	19.5	**Kabul**	101962	3.8
Bamyan	45100	19.4	**Kunduz**	11459	3.7
Kunduz	58789	18.9	**Daykundi**	8449	3.4
Parwan	42659	18.8	**Kunar**	17470	3.4
Paktika	36533	18.8	**Faryab**	15796	3.2
Ghazni	63639	18.3	**Panjsher**	4757	3.0
Panjsher	28408	18.0	**Kapisa**	6262	2.9
Samangan	47108	17.5	**Nangarhar**	33676	2.6
Jawzjan	85569	17.1	**Ghor**	7343	2.5
Sari Pul	44339	16.8	**Badghis**	5081	2.4
Badakhshan	68007	16.7	**Paktika**	4599	2.4
Kandahar	72304	16.6	**Kandahar**	9445	2.2
Takhar	63364	16.3	**Paktya**	6256	2
Hilmand	56648	16.3	**Hilmand**	6925	2
Nimroz	26924	15.8	**Khost**	4813	2
Laghman	50217	15.4	**Parwan**	4096	2
Uruzgan	43931	14.3	**Ghazni**	6122	2
Zabul	24370	14.1	**Nimroz**	2207	1
Badghis	28997	13.9	**Hirat**	9929	1
Kabul	373166	13.8	**Farah**	2536	1
Ghor	38995	13.2	**Zabul**	1466	1
Farah	23103	11.0	**Uruzgan**	2430	1
Total	**2572033**		**Total**	**487179**	

Table 29: Acute Watery Diarrhea/ AWDWD cases by province

No. of AWD cases and its % of total consultations			No. of AWDwD cases and its % of total consultations		
Province	**Cases**	**Percentages**	**Province**	**Cases**	**Percentages**
Paktya	36313	11.8	**Uruzgan**	6881	2.2
Samangan	31852	11.8	**Hilmand**	6388	1.8
Baghlan	31308	11.0	**Nangarhar**	23509	1.8
Nimroz	18118	10.6	**Laghman**	5504	1.7
Nuristan	10024	10.1	**Paktya**	4358	1.4
Laghman	32665	10.0	**Kandahar**	5485	1.3
Ghazni	33780	9.7	**Khost**	2716	1.1
Kandahar	41678	9.6	**Paktika**	1738	0.9
Jawzjan	46395	9.3	**Kunduz**	2772	0.9
Badghis	19012	9.1	**Parwan**	1954	0.9
Hilmand	31727	9.1	**Nimroz**	1360	0.8
Zabul	15421	9.0	**Ghazni**	2614	0.8
Daykundi	20785	8.5	**Kunar**	3690	0.7
Kapisa	18272	8.4	**Baghlan**	1998	0.7
Hirat	67882	8.3	**Kabul**	18827	0.7
Farah	16422	7.8	**Bamyan**	1599	0.7
Logar	24909	7.8	**Sari Pul**	1593	0.6
Ghor	22848	7.7	**Zabul**	1004	0.6
Faryab	37419	7.5	**Samangan**	1502	0.6
Nangarhar	96225	7.4	**Logar**	1754	0.5
Takhar	28669	7.4	**Nuristan**	536	0.5
Uruzgan	22244	7.2	**Farah**	1061	0.51
Parwan	16213	7.2	**Balkh**	3146	0.50
Kunduz	21685	7.0	**Daykundi**	1209	0.49
Sari Pul	18301	6.9	**Takhar**	1815	0.5
Badakhshan	27983	6.9	**Jawzjan**	2245	0.4
Paktika	13396	6.9	**Wardak**	951	0.4
Khost	16234	6.6	**Ghor**	1005	0.3
Balkh	40324	6.5	**Badakhshan**	1228	0.3
Kunar	29284	5.7	**Hirat**	2282	0.3
Kabul	143693	5.3	**Faryab**	1120	0.2
Wardak	13533	5.3	**Badghis**	354	0.2
Bamyan	12295	5.3	**Panjsher**	94	0.1
Panjsher	7166	4.6	**Kapisa**	80	0.0
Total	**1064075**		**Total**	**114372**	

Table 30: Acute Bloody Diarrhea/Malaria cases by province

No. of Acute Bloody Diarrhea cases and its % of total consultations			No. of Malaria cases and its % of total consultations		
Province	**Cases**	**Percentage**	**Province**	**Cases**	**Percentage**
Kandahar	17487	4.0	**Kunar**	10227	2.01
Nuristan	3762	3.8	**Nangarhar**	24222	1.87
Laghman	11656	3.6	**Paktika**	3536	1.82
Wardak	7479	2.9	**Laghman**	4161	1.28
Jawzjan	14146	2.8	**Paktya**	3034	0.99
Baghlan	7856	2.8	**Hilmand**	3372	0.97
Nangarhar	34947	2.7	**Khost**	2154	0.88
Kunar	13141	2.6	**Nuristan**	809	0.81
Khost	6083	2.5	**Zabul**	1336	0.78
Balkh	15224	2.4	**Badakhshan**	1890	0.47
Ghazni	8400	2.4	**Jawzjan**	2193	0.44
Sari Pul	5901	2.2	**Ghazni**	1480	0.43
Kapisa	4281	2.0	**Balkh**	2636	0.42
Logar	6226	1.9	**Badghis**	730	0.35
Paktika	3771	1.9	**Kandahar**	1152	0.26
Zabul	3297	1.9	**Uruzgan**	779	0.25
Kunduz	5822	1.9	**Daykundi**	560	0.23
Hilmand	6480	1.9	**Logar**	526	0.16
Paktya	5393	1.8	**Panjsher**	230	0.15
Faryab	8544	1.7	**Wardak**	356	0.14
Bamyan	3956	1.7	**Takhar**	488	0.13
Badghis	3507	1.7	**Kapisa**	262	0.12
Nimroz	2850	1.7	**Sari Pul**	261	0.10
Parwan	3595	1.6	**Parwan**	191	0.08
Daykundi	3867	1.6	**Nimroz**	143	0.08
Badakhshan	6352	1.6	**Kabul**	2123	0.08
Uruzgan	4766	1.6	**Kunduz**	68	0.02
Samangan	4052	1.5	**Hirat**	149	0.02
Takhar	5820	1.5	**Ghor**	40	0.01
Farah	2854	1.4	**Bamyan**	28	0.01
Ghor	3883	1.3	**Farah**	23	0.01
Panjsher	1611	1.0	**Samangan**	28	0.01
Hirat	7489	0.9	**Faryab**	14	0.00
Kabul	24417	0.9	**Baghlan**	2	0.00
Total	268915		**Total**	**69203**	

Table 31: Suspected Meningitis/Severely Ill Child and Measles cases by province, 2012

No. of Suspected Meningitis/ SIC cases and its % out of total consultations			No. of Suspected Measles cases and its % out of total consultations		
Province	**Cases**	**Percentage**	**Province**	**Cases**	**Percentage**
Bamyan	349	0.15	**Nangarhar**	3152	0.24
Jawzjan	682	0.14	**Khost**	532	0.22
Hilmand	446	0.13	**Nuristan**	193	0.19
Balkh	800	0.13	**Wardak**	355	0.14
Logar	383	0.12	**Paktya**	394	0.13
Takhar	324	0.08	**Balkh**	771	0.12
Kunduz	241	0.08	**Hilmand**	386	0.11
Ghazni	248	0.07	**Kunduz**	303	0.10
Kabul	1875	0.07	**Laghman**	290	0.09
Hirat	535	0.07	**Zabul**	116	0.07
Badghis	127	0.06	**Kabul**	1540	0.06
Faryab	300	0.06	**Paktika**	94	0.05
Baghlan	157	0.06	**Logar**	153	0.05
Sari Pul	145	0.06	**Jawzjan**	215	0.04
Kandahar	227	0.05	**Daykundi**	105	0.04
Samangan	117	0.04	**Bamyan**	97	0.04
Kunar	205	0.04	**Uruzgan**	126	0.04
Nangarhar	462	0.04	**Kandahar**	177	0.04
Badakhshan	140	0.03	**Kapisa**	88	0.04
Khost	62	0.03	**Ghor**	117	0.04
Wardak	60	0.02	**Takhar**	128	0.03
Parwan	32	0.01	**Kunar**	162	0.03
Laghman	44	0.01	**Baghlan**	85	0.03
Paktika	22	0.01	**Hirat**	195	0.02
Daykundi	25	0.01	**Parwan**	48	0.02
Paktya	30	0.01	**Ghazni**	65	0.02
Panjsher	15	0.01	**Badakhshan**	66	0.02
Farah	20	0.01	**Nimroz**	27	0.02
Ghor	16	0.01	**Panjsher**	21	0.01
Nimroz	7	0.00	**Badghis**	21	0.01
Zabul	6	0.00	**Samangan**	23	0.01
Nuristan	3	0.00	**Faryab**	33	0.01
Uruzgan	9	0.00	**Sari Pul**	14	0.01
Kapisa	5	0.00	**Farah**	2	0.00
Total	8119		**Total**	10094	

Table 32: Provinces with the number of reported Hemorrhagic fever cases

Sl. No.	Province	No. of Hemorrhagic Fever cases
1	**Hirat**	14
2	**Parwan**	14
3	**Paktika**	13
4	**Nimroz**	12
5	**Kapisa**	11
6	**Logar**	8
7	**Hilmand**	6
8	**Faryab**	5
9	**Paktya**	5
10	**Kabul**	5
11	**Zabul**	4
12	**Badghis**	4
13	**Panjsher**	4
14	**Nuristan**	4
15	**Balkh**	3
16	**Khost**	3
17	**Ghazni**	2
18	**Jawzjan**	2
19	**Kandahar**	2
20	**Kunduz**	2
21	**Nangarhar**	2
22	**Takhar**	2
23	**Samangan**	1
Total		128

Table 33: Number of outbreaks/ percentage by province

S.N	Province	No. of outbreaks	% of outbreaks
1	Hirat	34	10.5
2	Paktika	27	8.3
3	Nangarhar	26	8.0
4	Kandahar	23	7.1
5	Paktya	21	6.5
6	Kabul	16	4.9
7	Zabul	15	4.6
8	Khost	13	4.0
9	Balkh	12	3.7
10	Uruzgan	12	3.7
11	Bamyan	11	3.4
12	Badakhshan	11	3.4
13	Nuristan	10	3.1
14	Ghor	10	3.1
15	Kunar	8	2.5
16	Hilmand	7	2.2
17	Kapisa	7	2.2
18	Takhar	7	2.2
19	Daykundi	6	1.8
20	Parwan	6	1.8
21	Jawzjan	5	1.5
22	Ghazni	5	1.5
23	Nimroz	5	1.5
24	Laghman	4	1.2
25	Logar	4	1.2
26	Wardak	3	0.9
27	Kunduz	3	0.9
28	Samangan	3	0.9
29	Faryab	3	0.9
30	Sari Pul	3	0.9
31	Baghlan	2	0.6
32	Badghis	2	0.6
33	Panjsher	1	0.3
34	Farah	0	0.0
	Total	325	100

Table 34: Number of measles outbreaks by province

Province	No of Measles Outbreaks Cases	Percentages	No. of Associated Cases	Percentages
Paktika	24	11.3	214	6.3
Nangarhar	21	9.9	312	9.2
Paktya	21	9.9	348	10.3
Zabul	13	6.1	168	5.0
Kandahar	12	5.6	150	4.4
Uruzgan	12	5.6	211	6.2
Hirat	11	5.2	292	8.6
Khost	10	4.7	367	10.8
Balkh	9	4.2	91	2.7
Ghor	9	4.2	344	10.2
Kunar	8	3.8	107	3.2
Kabul	6	2.8	115	3.4
Takhar	6	2.8	88	2.6
Nuristan	5	2.3	50	1.5
Parwan	5	2.3	36	1.1
Jawzjan	5	2.3	42	1.2
Kapisa	4	1.9	42	1.2
Daykundi	4	1.9	42	1.2
Ghazni	4	1.9	64	1.9
Bamyan	3	1.4	30	0.9
Hilmand	3	1.4	17	0.5
Logar	3	1.4	45	1.3
Wardak	3	1.4	59	1.7
Kunduz	3	1.4	48	1.4
Badakhshan	2	0.9	21	0.6
Nimroz	2	0.9	31	0.9
Laghman	2	0.9	22	0.6
Sari Pul	2	0.9	26	0.8
Baghlan	1	0.5	7	0.2
Samangan	0	0	0	0
Faryab	0	0	0	0
Badghis	0	0	0	0
Panjsher	0	0	0	0
Farah	0	0	0	0
Total	213	100	3389	100

Table 35: Number of pertussis outbreaks and its Associated Cases by province

Province	No. of Pertussis outbreaks	Percentage	No. of Associated Cases	Percentage
Kandahar	6	23.1	95	7.9
Zabul	2	7.7	33	2.8
Paktika	2	7.7	8	0.7
Parwan	1	3.8	3	0.3
Herat	4	15.4	662	55.4
Balkh	1	3.8	8	0.7
Samangan	1	3.8	5	0.4
Faryab	1	3.8	3	0.3
Badakhshan	4	15.4	368	30.8
Takhar	1	3.8	2	0.2
Baghlan	1	3.8	2	0.2
Kabul	1	3.8	3	0.3
Kapisa	1	3.8	4	0.3
Total	26	100	1196	100

Table 36: Emergency Cases reported daily from all provinces through RadioCodan

Province	Explosion		Burn		Criminal		Traffic		Natural	
	Injury	Death	Injury	Death	Injury	Death	Injury	Death	Injury	Death
Badakhshan	25	1	51	0	471	1	325	4	21	3
Badghis	36	6	413	5	805	10	1165	3	0	0
Baghlan	47	10	153	2	1297	40	1119	42	11	8
Balkh	73	28	20	0	79	24	536	71	0	0
Bamian	0	0	136	0	307	1	187	0	9	3
Daikondy	2	1	44	0	84	1	162	21	12	16
Farah	84	42	303	0	795	25	1448	14	0	0
Faryab	158	74	571	6	1169	73	1476	35	0	0
Ghazni	77	27	73	0	423	108	773	115	0	0
Ghor	13	0	411	0	538	14	1027	4	0	0
Hilmand	56	5	512	0	721	0	1488	1	0	0
Hirat	43	12	3776	0	3912	59	7804	64	0	0
Jawzjan	45	1	868	3	368	7	2043	41	18	2
Kabul	96	7	4136	0	7653	11	10971	22	0	0
Kandahar	1136	253	311	20	1903	261	5386	198	11	6
Kapisa	30	14	155	0	566	9	820	5	6	0
Khost	89	21	17	0	132	28	480	8	0	0
Kunarha	112	7	8	0	113	11	120	4	5	0
Kundoz	30	5	319	1	1168	37	565	19	0	0
Laghman	27	19	39	0	586	23	877	2	0	0
Logar	83	24	76	0	272	40	795	11	0	1
Wardak	189	11	8	0	162	21	290	12	0	0
Neemroz	172	49	709	4	454	25	987	16	0	0
Ningarhar	256	17	505	1	960	2	1723	4	0	0
Nooristan	3	0	0	0	3	3	1	1	0	45
Orozgan	179	73	5	0	297	37	720	7	0	0
Paktia	75	11	2	0	141	16	162	10	0	0
Paktika	40	7	11	0	331	10	417	14	0	0
Panjsheer	2	0	38	0	74	0	147	1	1	2
Parwan	17	3	1191	0	789	51	2070	55	0	1
Samangan	57	14	302	0	582	9	904	39	14	2
Sar-e-pul	36	7	25	3	794	26	553	9	13	52
Takhar	0	0	402	1	3483	14	1279	5	0	0
Zabul	95	28	198	0	102	24	746	45	0	0
Grand Total	3383	777	15788	46	31534	1021	49566	902	121	141