



### Highlights

*Epidemiological week no. 13  
(24 to 30 March, 2013)*

- Measles:** This week a total of 48 alerts investigated, responding and monitoring to 1 outbreak. 186 measles cases from 29 districts, while 2 deaths reported from 1 district. Vitamin-A drops provided to all the suspects and district health teams took action to improve vaccination in affected areas.
- 77 districts and 2257 health facilities** have reported to DEWS this week 13, compared with 75 districts with 2289 health facilities shared weekly data in week 12, 2013 to the Disease Early Warning System (DEWS).
- 845,517** patients' consultations were reported in week 13, 2013 compared to **816,360** consultations reported in week 12, 2013.
- Altogether **70** alerts were investigated and response were provided to **2** outbreaks.

Figure-1: 77 districts reported to DEWS in week 13, 2013



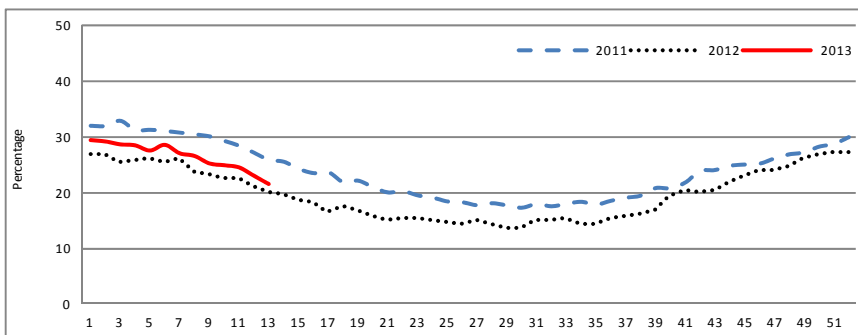
#### Priority diseases under surveillance in DEWS

- Pneumonia
- Acute Watery Diarrhoea
- Bloody diarrhoea
- Other Acute Diarrhoea
- Suspected Enteric/Typhoid Fever
- Suspected Malaria
- Suspected Meningitis
- Suspected Dengue fever
- Suspected Viral Hemorrhagic Fever
- Suspected Measles
- Suspected Diphtheria
- Suspected Pertussis
- Suspected Acute Viral Hepatitis
- Neonatal Tetanus
- Acute Flaccid Paralysis
- Scabies
- Cutaneous Leishmaniasis

Cumulative number of selected health events reported in Epi-week 1 to 13, 2013 (29 Dec 2012 to 30 Mar 2013)

Disease	# of Cases	Percentage
ARI	2,957,955	26%
Bloody diarrhoea	30,770	<0.5%
Acute diarrhoea	734,463	7%
S. Malaria	525,375	5%
Skin Diseases	421,561	4%
Unexplained fever	368,362	3%
<b>Total (All consultations)</b>	<b>11,214,136</b>	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-13, 2013.



Major health events reported during the Epi-week - 13 (24 to 30 Mar 2013)

Disease	# of Cases	Percentage
ARI	182,773	22%
Bloody diarrhoea	1,782	<0.5%
Acute diarrhoea	64,188	8%
S. Malaria	36,195	4%
Skin Diseases	30,459	4%
Unexplained fever	27,074	3%
<b>Total (All consultations)</b>	<b>845,517</b>	

- The graph (Figure-2) shows the comparison of weekly trend of Acute respiratory infection (ARI) as proportional morbidity (percentage of cases out of total consultations) reported to DEWS each week in year 2011; 2012 and 2013.

Last week's (Wk 12-13/2013) Outbreaks:

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
29-Mar	Leishmaniasis	Balochistan	Killa Saiful-lah	Muslim Bagh town area, Tehsil Muslim Bagh	6	19	1	9	In continuation of Cutaneous Leishmaniasis outbreak a total of 35 cases were reported so far. Patients were investigated and treatment provided as per WHO protocol. From all the suspects no one had travelling history. Health session taken and information shared with DHO.
29-Mar	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village Kandao, Sorai khowa, UC Kharki, Tehsil Takht Bhai	2	3	3	6	Alert for Cutaneous Leishmaniasis reported from UC Kharki. During active surveillance 13 more clinical cases were identified in the area and surroundings. Required doses of Inj-Glucantime were placed in nearby health facility for all the registered cases. FPHC Mardan, Relief Intl., PPHI were requested for vector control interventions in the area and surroundings. On the job training of health staff was conducted for Intralesional administration of Inj-Glucantime. RBM focal person was informed and requested for vector control measures in the areas. Information shared with EDO Health and focal person.
26-29 Mar	Measles	Punjab	Bhakkar	UC Gadola, Tehsil Bhakkar.	2	1	2	1	In continuation of Measles Outbreak in Tehsil Bhakkar.5 more suspected cases of measles were reported from 3 locations. During active surveillance no more Measles cases were found. All the suspects were given single dose of Vitamin-A, while second dose were ensured after 24 hours. Community was provided awareness through health education session for highlighting importance of vaccination of children against all the EPI diseases. General hygiene and isolation measures were demonstrated to the community. Mop-up campaign planned. Information shared with EDO(H).
27-Mar	Measles	Punjab	Lahore	Cantonment; Wahga Town	17	4	13	7	In continuation of Measles outbreak, 41 suspected cases were reported from two locations. All the suspected were given 1st dose of vitamin-A and 2nd dose provided to mothers. During active surveillance a total of 200 children were checked for routine EPI coverage where 37 children were found to have missed second dose of Measles. Mass Vaccination campaign was arranged in the nearest Health facility of the affected areas and 218 children were vaccinated. Blood samples of and Throat swabs from 6 cases were taken and send to NIH. Health education sessions in community were conducted with the help of LHW, religious and community Leaders. Information shared with EDO(H).
26-28 Mar	Measles	Sindh	Badin	Nanji Kolhi, UC Mithi -3, taluka Badin; Rab Dino Jat, UC Ghara, taluka Golarchi; Tando Bagho city, UC and taluka Tando Bagho	2	3	3	3	In continuation of Measles outbreak, 11 new suspected cases were reported from 3 different locations. Vitamin-A dose were given to all the suspects. Health education was imparted regarding importance of vaccination. Vaccination status of 89 children were assessed. 11 blood samples were collected and send to NIH. Information shared with DHO.
27-28 Mar	Measles	Sindh	Hyderabad	Block-F, near Siddiqui Akbar Masjid, taluka Latifabad	3	2	2	2	Alert for 9 suspected Measles cases were reported from 3 different locations in district Hyderabad. Vitamin-A dose were given to all the suspects. Health education session were imparted. vaccination status of 55 children were assessed. 9 blood samples were collected and sent to NIH. Information shared with DHO.
25-26 Mar	Measles	Sindh	Karachi	Baloch Muhalla, Azeem Plaza, near Shoe Market, Saddar Town; Baloch Para, Gizri, Saddar town	4	2	1	2	Alert for 2 suspected Measles cases from 2 different location were reported. 9 cases were found, all the cases were found unvaccinated for Measles. Vitamin-A dose were given to all the suspects. Health education sessions were imparted regarding importance of vaccination. Vaccination status of 46 children were assessed. 4 blood samples were collected and sent to NIH. Information shared with THMT and request to start mop-up activities in the area.
26-Mar	Measles	Sindh	Larkana	Hyderi Muhalla, Taluka Larkana; Solangi Muhalla, Taluka Ratodero	1	1	2	1	Alert for 3 suspected Measles cases were from 2 different locations. During active surveillance 2 more suspected cases were found in 1 Muhalla. Vitamin-A doses given to all the suspects. Health education sessions were conducted in the area. Routine cluster taken from 15 children. 2 blood samples were taken and sent to NIH. Information shared with DHO.
25-Mar	Measles	Sindh	Mirpur Khas	Ali Medical Clinic, UC -6; Gulu Bughio, UC Daulatpur; Mirwah, UC Mirwah; UC Jhulori, taluka Mirpurkhas	1	0	2	4	Alert for 5 suspected Measles cases were reported from 3 different locations in Taluka Mirpurkhas. During active surveillance 2 more case were found from 2 locations. Vitamin-A dose were given to all the suspects. Health education sessions were conducted in the community. Vaccination status of 127 children were assessed. 7 blood samples were taken and sent to NIH. Information shared with DHO.
24-Mar	Measles	Sindh	Sanghar	Village Wali Muhammad Chang, UC Sinjhor, taluka Sinjhor; Village UC Gul Muhammad Laghari, taluka Shahdadpur	2	2	0	1	Alert for 2 suspected cases of Measles were reported. During field investigation 3 more cases were found in 1 location. Vitamin-A dose given to all the suspects. Health education session were imparted. 4 blood samples were taken and sent to NIH. Information shared with DHO.
25-Mar	Measles	Sindh	Tharparkar	Village Hanjtal, UC Vejhiar; Village Kankio, UC Hirar, taluka Chachro; Village Mitrio Bhatti, UC Mithrio; Village Kewal colony, taluka Mithi; Village Mokhai, UC Virawah, taluka Nagarparkar	2	3	1	2	As a part of ongoing Measles outbreak 8 cases and 2 deaths were reported from 5 different locations. Deaths were verified and field investigation were carried out along with DHO team. During field investigation no more Measles cases were found. Health education sessions were conducted in the community. 5 samples were taken and sent to NIH. Information was shared with DHO office.
27-Mar	Measles	Sindh	Umer Kot	Village Ranhar, UC Kaplor, taluka Umerkot	2	0	1	1	Alert for suspected Measles case from village Ranhar, Taluka Umerkot. During active surveillance 3 more Measles cases were found. Only 1 case found vaccinated against Measles. 4 blood samples were taken and sent to NIH. Vitamin-A dose were given to all the suspects. Health education session imparted regarding importance of vaccination. Information shared with DHO.

Figure-3: Number of alerts received and responded, week 10 - 13, 2013

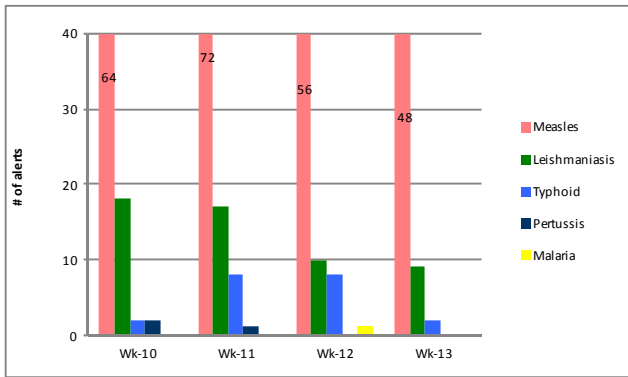
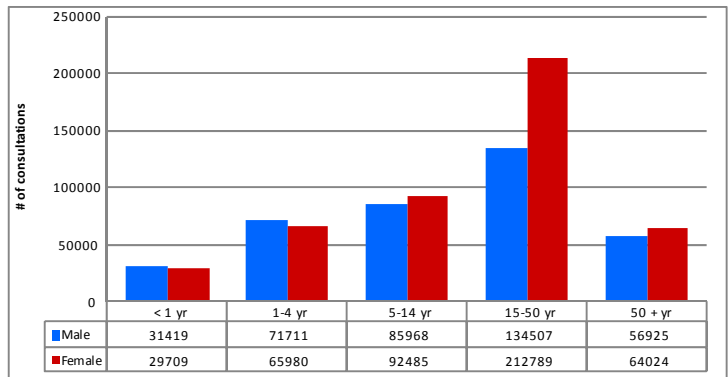


Figure-4: Number of consultations by age and gender, week 13, 2013



### Province Khyber Pakhtunkhwa:

404 health facilities from 14 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 111,335 patients consultations reported in week 13, 2013. A total of 16 alerts were received and appropriate measures were taken. Altogether 14 alerts were for Measles; while 2 for Leishmaniasis. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

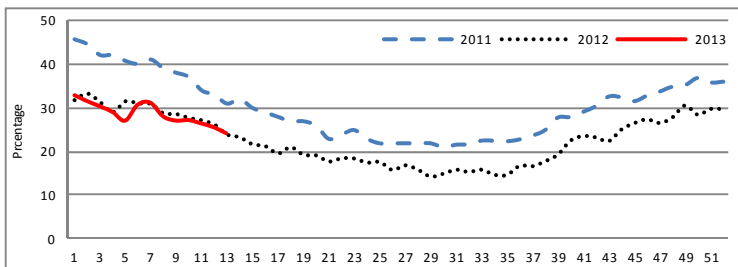
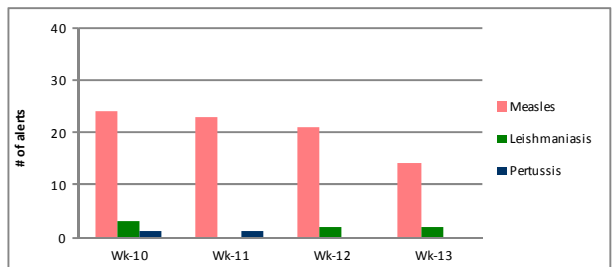


Figure-6: Number of alerts received and responded week 10 to 13, 2013



### Province Sindh:

838 health facilities from 23 districts in Sindh province reported to DEWS with a total of 349,891 patients consultations in week 13, 2013. Total 4 alerts were received and appropriate measures were taken. Altogether 3 alerts were for NNT; while 1 for Leishmaniasis. ARI trend showing a minor increase as compared with last week.

Figure-7: Trend of ARI, province Sindh

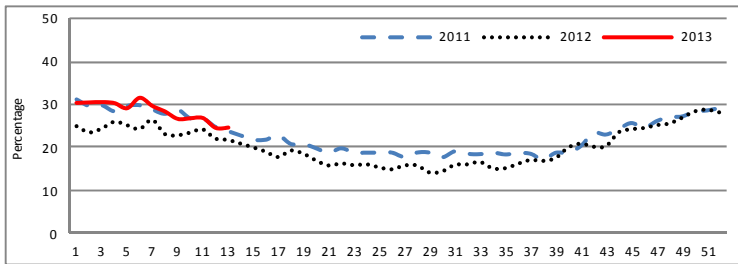
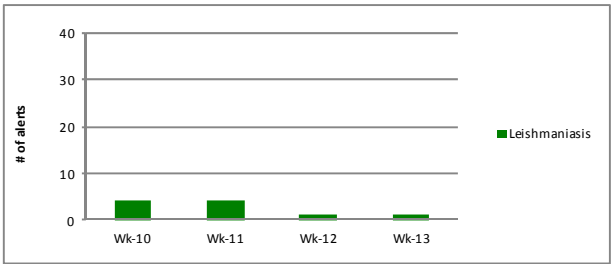


Figure-8: Number of alerts received and responded, week 10 to 13, 2013



### Province Punjab:

487 health facilities from 9 districts in province Punjab reported to DEWS with a total of 275,533 patients consultations in week 13, 2013. Total 34 alerts were received and appropriate measures were taken. Altogether 28 alerts were for Measles; 2 for Acute diarrhoea; while 1 each for ARI, Leishmaniasis, Scabies and Typhoid. ARI trend showing decrease as compared with last week.

Figure-9: Trend of ARI, province Punjab

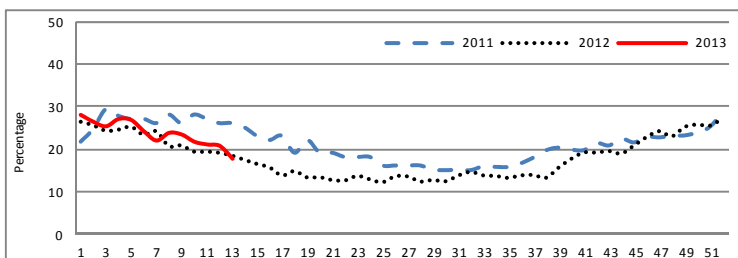
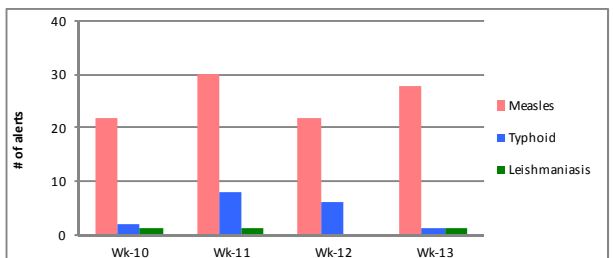


Figure-10: Number of alerts received and responded, week 10 to 13, 2013



**Province Balochistan:**

305 health facilities from 14 districts in province Balochistan reported to DEWS with a total of 47,794 patients consultations in week 13, 2013. Total 7 alerts reported and appropriate measures were taken in week 13, 2013. Altogether 2 each were for Leishmaniasis and CCHF; while 1 each for Scabies, Typhoid and Chickenpox. ARI trend showing decrease as compared with last week.

Figure-11: Trend of ARI, province Balochistan

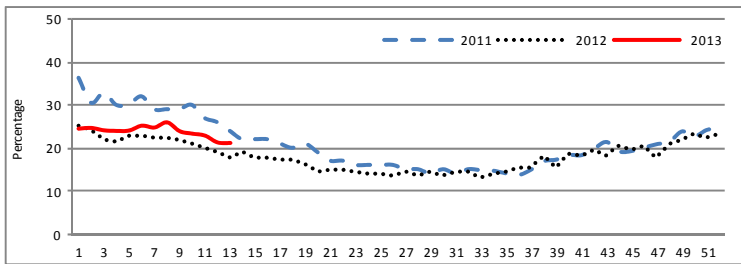
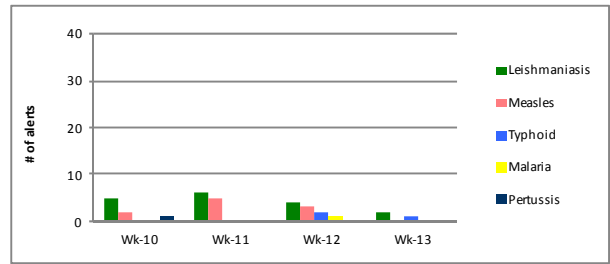


Figure-12: Number of alerts received and responded, week 10 to 13, 2013



**Province Gilgit Baltistan:**

46 health facilities from 5 districts in Gilgit Baltistan reported to DEWS with a total of 18,104 patients consultations in week 13, 2013. No alerts for any disease was reported in last 4 weeks (Wk 10 to 13), 2012. ARI showing a minor increase as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

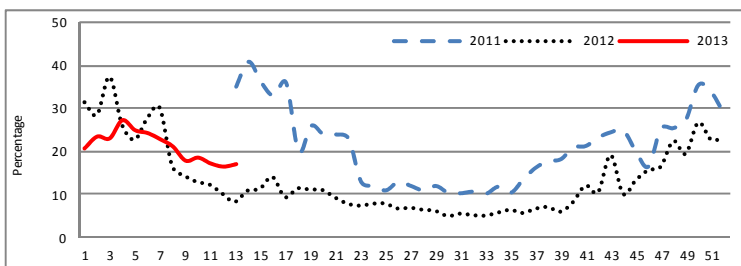
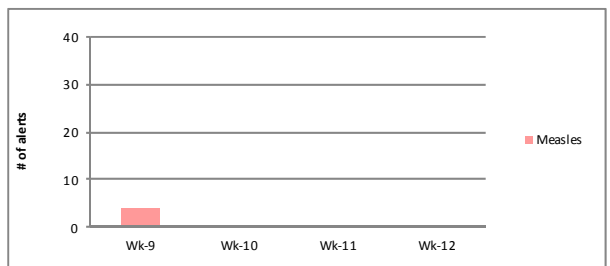


Figure-14: Number of alerts received and responded, week 9 to 12, 2013



**FATA:**

46 health facilities from 3 agencies in FATA reported to DEWS with a total of 11,913 patients consultations in week 13, 2013. 2 alerts for Leishmaniasis were reported in week 13, 2012 and appropriate measures were taken. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

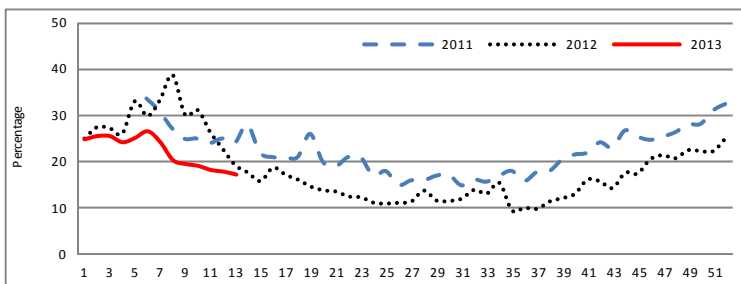
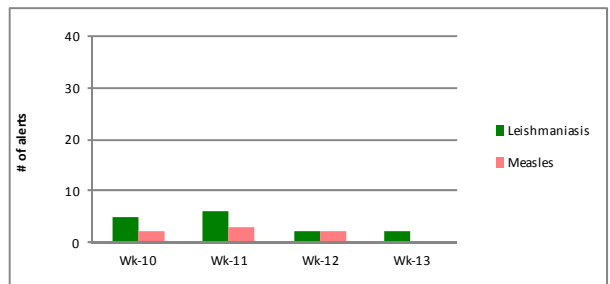


Figure-16: Number of alerts received and responded, week 10 to 13, 2013



**State of Azad Jammu and Kashmir:**

118 health facilities from 8 districts in AJ&K reported to DEWS with a total of 27,750 patients consultations in week 13, 2013. 5 alerts, 4 for Measles; while 1 for Leishmaniasis were reported in week 13, 2013. ARI trend showing decrease as compared with last week.

Figure-17: Trend of ARI, AJ&K

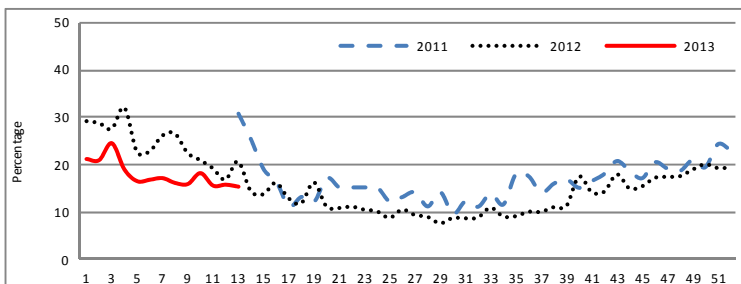


Figure-18: Number of alerts received and responded, week 10 to 13, 2013

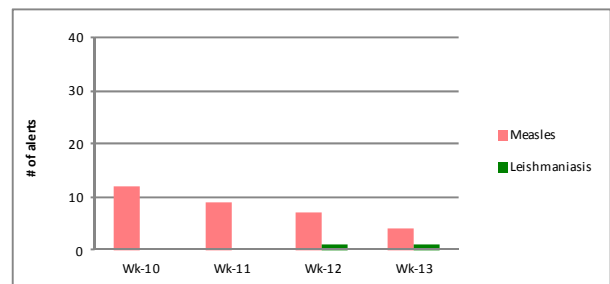


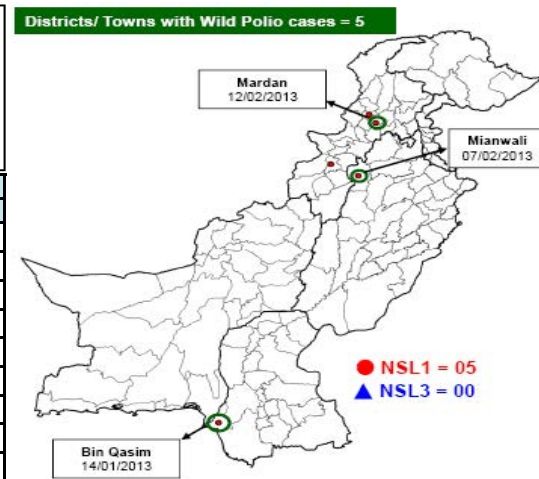
Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 13, 2013		2013 (Total up till week - 13)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	0	0	8	1
Acute jaundice syndrome	113	22	0	0	9	3
Bloody diarrhoea	146	11	0	0	6	1
CCHF	68	41	2	0	5	1
Dengue fever	175	29	0	0	1	0
Diphtheria	60	16	0	0	12	1
Measles	5922	812	48	1	1533	202
Pertussis	366	147	0	0	18	4
NNT + tetanus	560	0	3	0	91	0
Malaria	136	68	0	0	4	2
Leishmaniasis	900	78	9	1	265	36
Others	1529	58	8	0	132	3
<b>Total</b>	<b>10610</b>	<b>1453</b>	<b>70</b>	<b>2</b>	<b>2084</b>	<b>254</b>

**Distribution of Wild Polio Virus cases Pakistan 2012 and 2013**

- In week 13, 2013, no new polio case was reported in the country. The total number of polio cases and infected districts in the country remain 5 in 2013. The total number of wild polio cases country wide for the year 2012 remains 58 (55 type-1, 2 type-3 & 1 mixture type-1 & 3) from 28 districts/tribal agencies (compared to 60 in 2011).

Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	1	-	-
Sindh	4	-	-	1	-	-
Khyber Pakhtunkhwa	27	-	-	3	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
<b>Total</b>	<b>55</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>

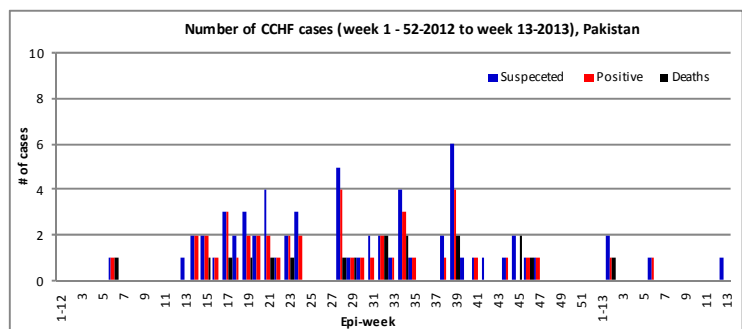


**Follow up of CCHF**

CCHF is a serious viral hemorrhagic fever with up to 50% case fatality rate, caused by an RNA virus of family Bunyaviridae, genus Nairovirus, carried by Hyalomma species of ticks. Human beings become infected by tick bites or crushing the ticks, which are usually found on sheep, cattle, goats or camels, and their slaughtered skins. They may also be exposed to the virus in blood or tissues of a viremic animal during its slaughter and butchering; or by contact with infected blood or secretions of acute human cases in home or hospital setting.

In week 13, 2013, 1 new suspected CCHF case reported from district Loralai, Balochistan. The laboratory result is awaited. The total number of CCHF cases were 4 for the year 2013. The case have no epidemiological link.

In 2012, a total of 61 suspected cases have been reported throughout the country with 41 cases confirmed to date and in total 17 deaths; of which 13 deaths (CFR is 31.7%) are reported of the lab confirmed cases and 4 deaths are reported as suspected CCHF cases. 23 confirmed cases have been reported from Balochistan; 7 from Sindh; 6 from Khyber Pakhtunkhwa and 5 from Punjab. Chart at right illustrates current situation of CCHF cases in 2012.



Approximately all the cases had contact history with animal trading/handling, tick bite, contact with patient, tannery worker, butcher/animals slaughtering, a traditional practice of wearing fresh animal skin (posti) to treatment ailment. These animals and their skins had continuous movement Intra Pakistan and between neighboring countries (Afghanistan and Iran).

Any contact of a CCHF patient should monitor his/her temperature for 14 days and see a doctor if fever develops. The anti viral medicine Ribavirin has been effective in saving lives of patients who report early to the health facility.

**Focus on: Measles**

Measles is a highly contagious viral disease, which affects mostly children. It is transmitted via droplets from the nose, mouth or throat of infected persons. Initial symptoms, which usually appear 10–12 days after infection, include high fever, runny nose, bloodshot eyes, and tiny white spots on the inside of the mouth. Several days later, a rash develops, starting on the face and upper neck and gradually spreading downwards. There is no specific treatment for measles and most people recover within 2–3 weeks. However, particularly in mal-nourished children and people with reduced immunity, measles can cause serious complications, including blindness, encephalitis, severe diarrhoea, ear infection and pneumonia.

Measles is a killer childhood disease but preventable through immunization. One in 15 people have complications with measles, and one in 1,000 will die of it, but two doses of measles vaccine will protect people against the disease. WHO has set the target for measles elimination for 2015 which would require that more than 95% of the world children are covered by two doses of measles vaccine.

**Proper case management during outbreaks:**

It is imperative that during outbreak situations proper case management is ensured in order to minimize measles related deaths and measles related complications. The treatment of measles patients with Vitamin A will dramatically reduce their risk of deaths. Two doses of Vitamin A will be given to all identified cases (active and old) during house-to-house investigation, unless it was already received as part of the treatment in the health facility. One dose to be given by the health worker on the day of investigation and the 2nd dose provide to the parents advising to give on next day. The therapy will be given regardless of previous vitamin A prophylaxis. If the investigation team observes complications, the patient should be referred to the nearest health facility for specific treatment of these complications.

**Measles Prevention:**

Routine measles vaccination for children; combined with mass immunization campaigns in countries with high case and death rates, is key public health strategy to reduce global measles mortality rates. The measles vaccine has been in use for over 40 years. It is safe, effective and inexpensive. It costs less than one US dollar to immunize a child against measles. Measles vaccine is provided by the Pakistan EPI programme to children at 9 months and 15 months. Children who are vaccinated against measles before 9 months of age must receive a 2nd measles vaccination at 9 months age ensuring a gap of one month between both vaccinations. Moreover, any child who received measles vaccine should also receive OPV.

Priority should be placed to immunize children 6 months to 5 years old during outbreaks, regardless of vaccination status or history of disease. Auto destructible syringes and safety boxes are recommended and safe disposal of used sharps and safety of injection during immunization should be ensured. Let's remind all our neighbors, friends and colleagues to be sure that their children are immunized against measles.

Table at the bottom summarizes the situation of measles in year 2012; and illustrates the alerts and outbreaks in 2013 up till week 13 (30 March 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 13)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	109	6	223	1
Balochistan	447	119	1816	31	261	45	1084	45
FATA	211	31	559	13	54	12	173	3
Gilgit Baltistan	40	1	54	0	11	0	22	0
ICT	27	2	63	0	18	2	67	1
Khyber Pakhtunkhwa	1989	108	3542	38	457	65	1137	19
Punjab	809	40	1329	16	512	48	3204	18
Sindh	2234	505	7353	212	111	24	2988	133
Total	5922	812	14984	310	1533	202	8898	220



Alerts and outbreaks, week 13, 2013

