



### Highlights

*Epidemiological week no. 10  
(3 to 9 March, 2013)*

- **Measles:** This week a total of 59 alerts investigated, responding and monitoring to 8 outbreaks. 459 measles cases from 40 districts, while 3 deaths reported from 3 districts. Vitamin-A drops provided to all the suspects and district health teams took action to improve vaccination in affected areas.
- **83 districts** and 2533 health facilities have reported to DEWS this week 10, compared with 80 districts with 2469 health facilities shared weekly data in week 9, 2013 to the Disease Early Warning System (DEWS).
- **961,947** patients' consultations were reported in week 10, 2013 compared to **919,312** consultations reported in week 9, 2013.
- Altogether **95** alerts were investigated and response were provided to **12** outbreaks.

Figure-1: 83 districts reported to DEWS in week 10, 2013



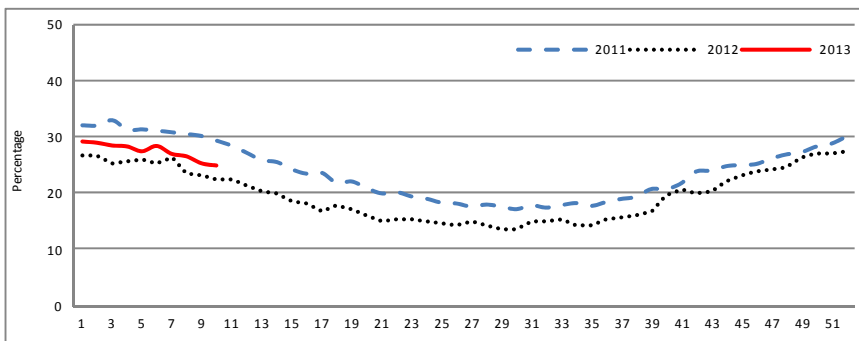
#### Priority diseases under surveillance in DEWS

- 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 10, 2013 (29 Dec 2012 to 9 Mar 2013)

Disease	# of Cases	Percentage
ARI	2,356,773	27%
Bloody diarrhoea	24,951	<0.5%
Acute diarrhoea	536,020	6%
S. Malaria	402,236	5%
Skin Diseases	325,167	4%
Unexplained fever	283,000	3%
<b>Total (All consultations)</b>	<b>8,615,715</b>	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-10, 2013.



Major health events reported during the Epi-week - 10 (3 to 9 Mar 2013)

Disease	# of Cases	Percentage
ARI	238,824	25%
Bloody diarrhoea	2,447	<0.5%
Acute diarrhoea	66,263	7%
S. Malaria	45,786	5%
Skin Diseases	36,825	4%
Unexplained fever	29,345	3%
<b>Total (All consultations)</b>	<b>961,947</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.

## Current week's (10/2013) Outbreaks:

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
5-Mar	Measles	AJK	Bagh	Vill Arja UC Mallot Tehsil Dhirkot	5	1	1	5	Alert for suspected Measles case reported from DHQ Bagh. Case was fully immunized. Blood sample taken and sent to NIH. Upon investigation with DoH 11 more cases (3 active and 8 recovered) were found. Vit-A given to all the suspects. Health education session was conducted. Information shared with DoH and EPI coordinator and out reach vaccination planned.
4-Mar	Measles	AJK	Sudhnoti	Village & UC Jhanda Bagla, Tehsil Pallandri	1	2	3	1	Alert for AJS reported from DHQ hospital, Pallandri. During field investigation in collaboration with DoH team 7 more suspected cases of AJS were found. 1 blood sample taken and sent to NIH. IEC material and Hygiene kits were distributed in the community.
8-Mar	Leishmaniasis	Balochistan	Lasbela	Gulsheri, UC Sonmiani, Tehsil Sonmiani	3	3	1	2	Alert for 9 suspected cases of Cutaneous Leishmaniasis reported by SMO. Cases were presented with multiple lesions. None of the case had travelling history. Injection Glucantime were provided to the health facility staff,. Capacity building regarding injection administration was done and advised to continue the treatment of the cases. Information shared with DHO.
4-Mar	Leishmaniasis	FATA	Khyber Agency	UC Mian Morcha, Tehsil Mulagori	3	1	0	2	Alert for suspected Cutaneous Leishmaniasis cases were reported from BHU Mian Morcha. During active surveillance 6 more suspected cases were found. Health education session imparted. Injection Glucantime provided. LLINs bed nets were provided to affected families. Information shared with Agency Surgeon and PPHI.
9-Mar	Leishmaniasis	FATA	Khyber Agency	UC Pindi Lalma, Tehsil Mulagori	6	3	2	10	Alert for suspected Cutaneous Leishmaniasis cases were reported from CD Pindi Lalma. On active surveillance a total of 21 cases were found in the area. Injection Glucantime provided to the health facility and LLINs bed nets were also provided. Report was shared with Agency surgeon.
5-Mar	Leishmaniasis	FATA	Mohmand Agency	Village Ziarat Kale Tehsil Safi	2	6	1	1	Alert for 4 suspected Cutaneous Leishmaniasis cases reported from village Ziarat Kale. During field investigation 6 more suspected cases were found. Health education session conducted in the community regarding Cutaneous Leishmaniasis. Malaria control program contacted regarding vector control measures. Information shared with Agency Surgeon.
4-Mar	Measles	Khyber Pakhtunkhwa	D. I. Khan	Village Gara Hayat, Tank Road	2	0	2	1	Alert for suspected measles, 3 years old unvaccinated male child resident of village Gara Hayat reported from BHU Zafarabad and referred to Isolation Ward of Pediatric Unit. During active surveillance 3 more cases were found in the same village. Information shared with DoH.
5-Mar	Measles	Khyber Pakhtunkhwa	Mardan	Village Khan Palao near Nazim Hujra, UC Jamal Ghari, Tehsil Mardan	3	1	1	1	Alert for suspected Measles reported from Type-D Hospital Katlang Mardan. 2 children from same family were brought to Children OPD of TDH Katlang, both cases were found unimmunized for measles vaccination. During Active Surveillance by DoH and WHO team 4 more clinical cases were identified in same family and surrounding, 1 blood sample collected and sent to NIH. Vitamin-A were given to all the suspects. All children of less than 5 years were sent to nearby health facility for vaccination. EPI team was informed and requested for outreach immunization. Health education session was conducted in the community with the help of LHW's working in the area. EDO-H Focal person and EPI Coordinator were informed.
8-Mar	Measles	Khyber Pakhtunkhwa	Swat	Mohallah & UC Malook Abad, near cheena Tehsil Babozai	5	0	3	0	Alert for suspected measles cases were reported from Mohallah and UC Malookabad. On active surveillance 8 suspected Measles cases were found. Vitamin-A provided to all the suspects. 2 Blood samples were taken and sent to NIH. Information shared with DHO and Coordinator EPI.
4-Mar	Measles	Punjab	Bhakkar	UC Chak # 60-61/ML; UC Patti Bilinda, Tehsil Bhakkar.	2	3	2	1	Alert for 8 suspected Measles cases from 2 different locations were reported from BHU Sarai Muhajir. Suspects were given single dose of Vitamin-A and second dose was ensured. Community was provided awareness through health education session for highlighting importance of vaccination against all the EPI diseases. General hygiene and isolation measures were demonstrated to the community. Information shared with EDO(H).
5-Mar	Measles	Punjab	Lahore	Aziz Bhatti Town - UC 54, UC 55, UC 56, UC 48, UC 41	7	1	4	2	Alert for 8 suspected Measles cases were reported from Children and Services hospital. The suspects has been given 1st dose of vitamin-A, while vaccinator and LHS were requested to give 2nd dose on next day. During active surveillance 6 more suspected cases were found. 50 children were checked for routine EPI coverage where 14 children were found to have missed second dose of Measles. Mass vaccination campaign arranged in the nearest Health facility and vaccination given to 142 children. Health education in community was conducted with the help of LHS. EDO(H) and Director EPI were informed.

Figure-3: Number of alerts received and responded, week 7 - 10, 2013

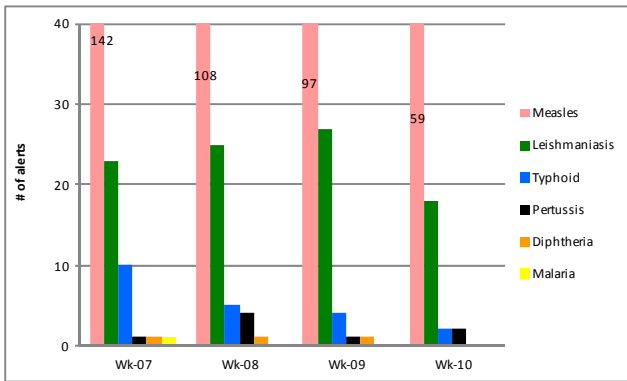
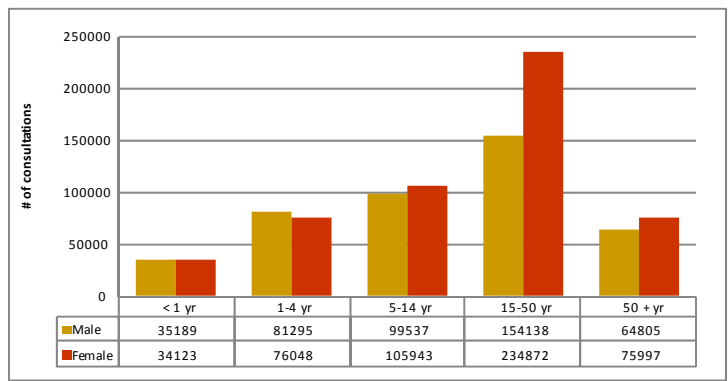


Figure-4: Number of consultations by age and gender, week 10, 2013



### Province Khyber Pakhtunkhwa:

450 health facilities from 14 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 112,190 patients consultations reported in week 10, 2013. Total 26 alerts were received and appropriate measures were taken. Altogether 20 alerts for Measles; 3 for Leishmaniasis; 2 for NNT; while 1 for Pertussis. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

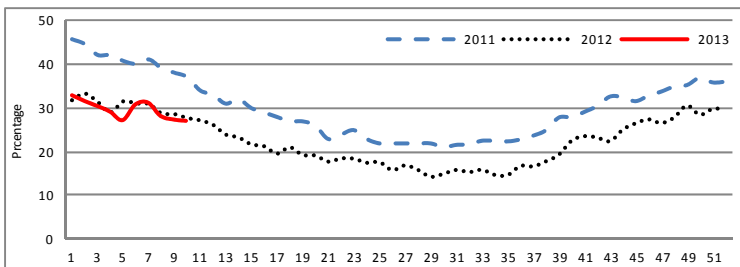
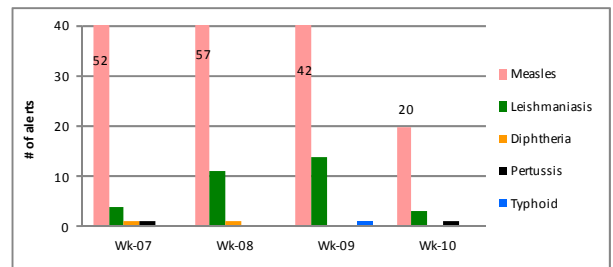


Figure-6: Number of alerts received and responded week 7 to 10, 2013



### Province Sindh:

1041 health facilities from 23 districts in Sindh province reported to DEWS with a total of 490,774 patients consultations in week 10, 2013. Total 9 alerts were received and appropriate measures were taken. Altogether 5 alerts were for NNT; while 4 for Leishmaniasis. ARI trend showing minor increase as compared with last week.

Figure-7: Trend of ARI, province Sindh

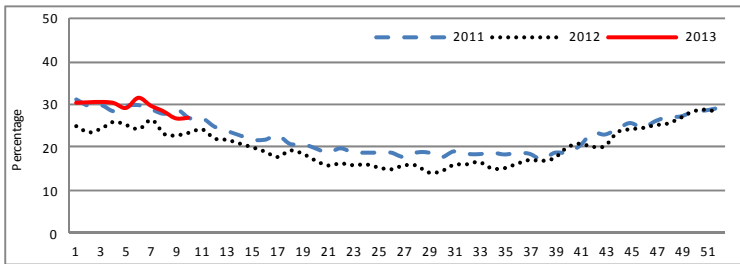
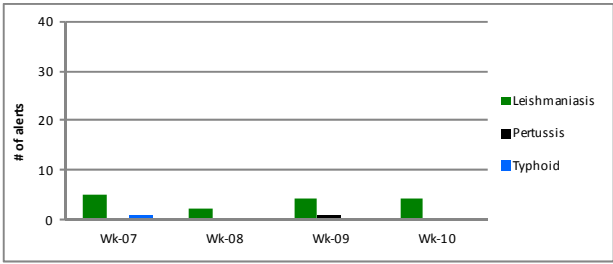


Figure-8: Number of alerts received and responded, week 7 to 10, 2013



### Province Punjab:

492 health facilities from 9 districts in province Punjab reported to DEWS with a total of 255,648 patients consultations in week 10, 2013. Total 28 alerts were received and appropriate measures were taken. Altogether 21 alerts were for Measles; 2 each for Acute diarrhoea and Typhoid; while 1 each for ARI, Leishmaniasis and NNT. ARI trend showing decrease as compared with last week.

Figure-9: Trend of ARI, province Punjab

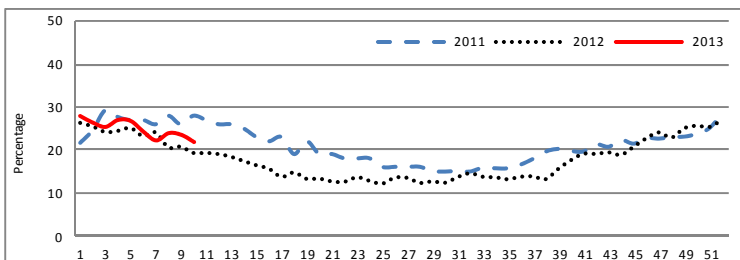
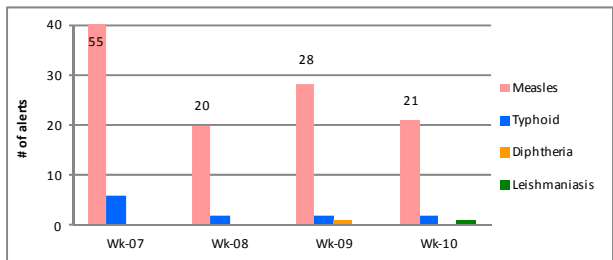


Figure-10: Number of alerts received and responded, week 7 to 10, 2013



**Province Balochistan:**

365 health facilities from 20 districts in province Balochistan reported to DEWS with a total of 51,605 patients consultations in week 10, 2013. Total 8 alerts reported and appropriate measures were taken in week 10, 2013. Altogether 5 alerts were for Leishmaniasis; 2 for Measles; while 1 for Pertussis. ARI trend showing decrease as compared with last week.

Figure-11: Trend of ARI, province Balochistan

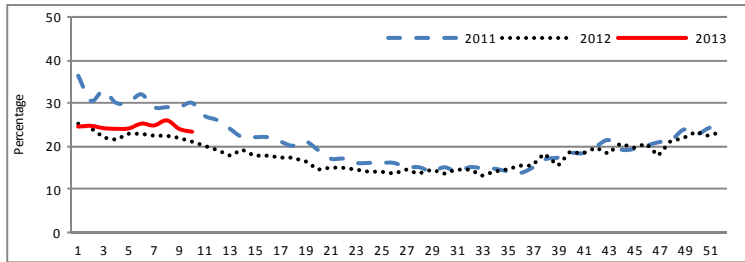
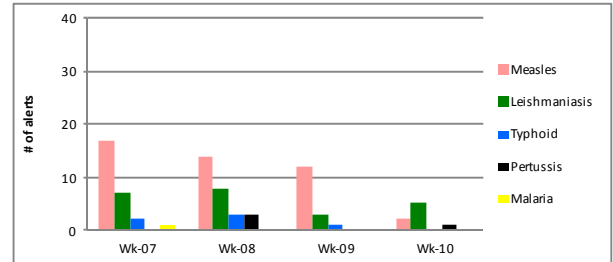


Figure-12: Number of alerts received and responded, week 7 to 10, 2013



**Province Gilgit Baltistan:**

50 health facilities from 5 districts in Gilgit Baltistan reported to DEWS with a total of 19,316 patients consultations in week 10, 2013. No alerts for any disease was reported in week 10, 2012. ARI showing minor increase as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

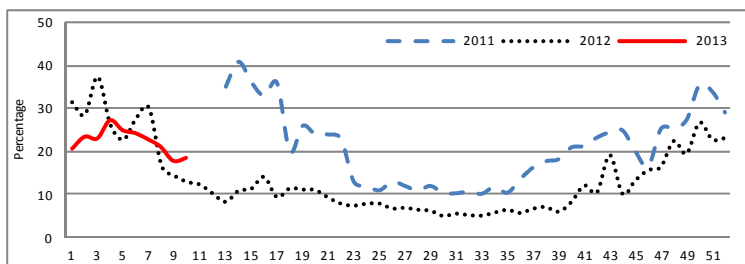
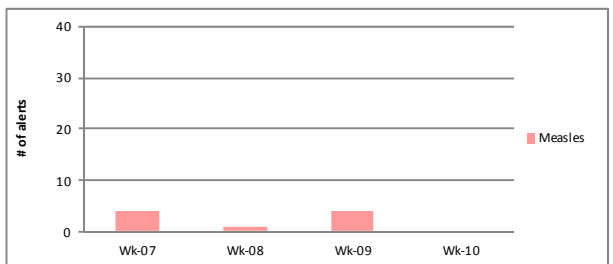


Figure-14: Number of alerts received and responded, week 7 to 10, 2013



**FATA:**

51 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,313 patients consultations in week 10, 2013. 10 alerts, 5 for Leishmaniasis; 3 for NNT; while 2 for Measles were reported in week 10, 2012 and appropriate measures were taken. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

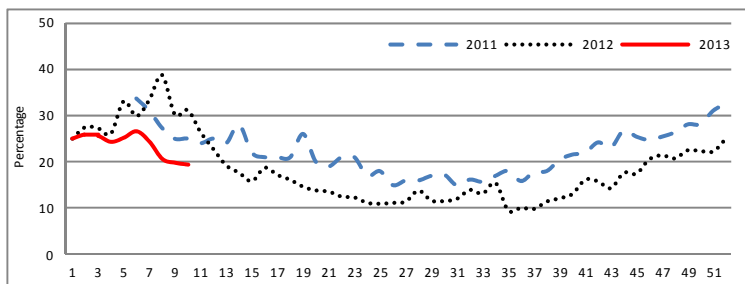
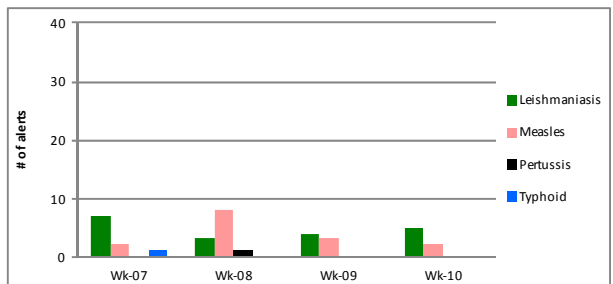


Figure-16: Number of alerts received and responded, week 7 to 10, 2013



**State of Azad Jammu and Kashmir:**

67 health facilities from 8 districts in AJ&K reported to DEWS with a total of 14,446 patients consultations in week 10, 2013. 12 alerts for Measles were received and appropriate measures were taken. ARI trend showing increase as compared with last week.

Figure-17: Trend of ARI, AJ&K

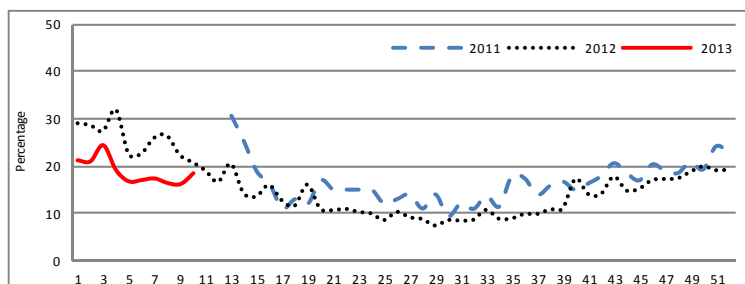


Figure-18: Number of alerts received and responded, week 7 to 10, 2013

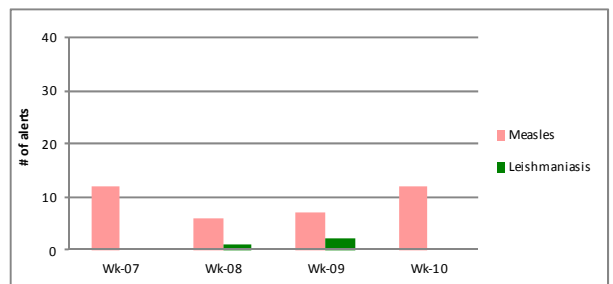
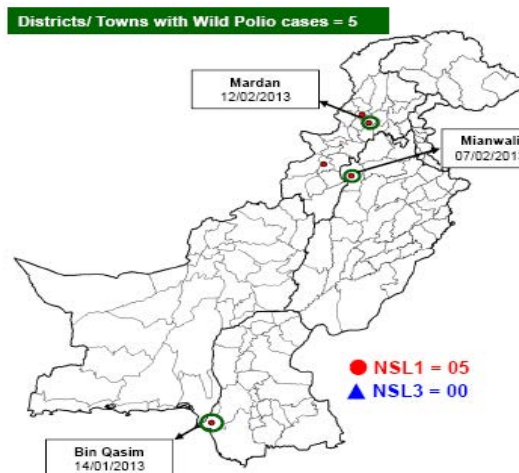


Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 10, 2013		2013 (Total up till week - 10)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	0	0	6	1
Acute jaundice syndrome	113	22	0	0	8	3
Bloody diarrhoea	146	11	0	0	6	1
CCHF	68	41	0	0	2	1
Dengue fever	175	29	0	0	0	0
Diphtheria	60	16	0	0	12	1
Measles	5922	812	59	8	1351	187
Pertussis	366	147	2	0	17	4
NNT + tetanus	560	0	11	0	66	0
Malaria	136	68	0	0	3	2
Leishmaniasis	900	78	18	4	229	33
Others	1529	58	5	0	93	1
<b>Total</b>	<b>10610</b>	<b>1453</b>	<b>95</b>	<b>12</b>	<b>1793</b>	<b>234</b>

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

- In week 10, 2013, no new polio case was reported in the country. An the total number of polio cases and infected districts in the country remain 5. 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).

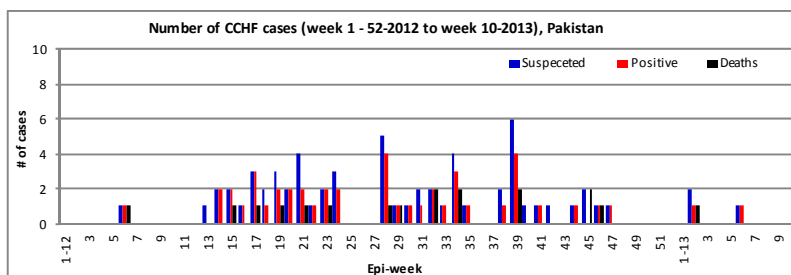


Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	1	-	-
Sindh	4	-	-	1	-	-
Khyber Pakhtunkhwa	27	-	-	3	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
<b>Total</b>	<b>55</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>

**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 10, 2013, no new CCHF case reported from any district. The total number of CCHF cases remains 3 for the year 2013. The last case reported in this year was in week 6, 2013, A 26 year old female patient admitted at the PIMS hospital in Islamabad as a suspected case of CCHF. Laboratory results confirmed the case positive for CCHF. The epidemiological investigation revealed history of Fever with rash later on developed gum bleeding and brought to PIMS hospital. Currently the patient is stable with all vital signs with in the normal range and discharged from hospital. 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 10 (9 March 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 10)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	88	6	184	0
Balochistan	447	119	1816	31	253	43	1049	45
FATA	211	31	559	13	49	11	161	2
Gilgit Baltistan	40	1	54	0	11	0	22	0
ICT	27	2	63	0	13	2	50	1
Khyber Pakhtunkhwa	1989	108	3542	38	395	59	980	19
Punjab	809	40	1329	16	431	42	2373	16
Sindh	2234	505	7353	212	111	24	2649	112
Total	5922	812	14984	310	1351	187	7468	195

Alerts and outbreaks, week 10, 2013

