



### Highlights

*Epidemiological week no. 8  
(17 to 23 Feb 2013)*

- **Measles:** 98 alerts investigated this week, responding and monitoring to 16 outbreaks. 593 measles cases in 52 districts, while 8 deaths reported from 6 district this week. Vitamin-A drops provided to cases and district health teams took action to improve vaccination in affected areas.
- **85 districts** and 2566 health facilities have reported to DEWS this week 8, compared with 87 districts with 2563 health facilities shared weekly data in week 7, 2013 to the Disease Early Warning System (DEWS).
- **918,692** patients' consultations were reported in week 8, 2013 compared to **976,785** consultations reported in week 7, 2013.
- Altogether **147** alerts were investigated and response were provided to **20** outbreaks.

Figure-1: 85 districts reported to DEWS in week 8, 2013



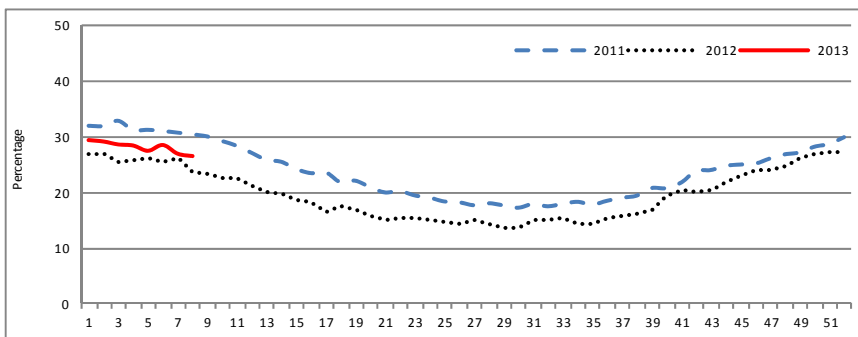
#### Priority diseases under surveillance in DEWS

- 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 8, 2013 (29 Dec 2012 to 23 Feb 2013)

Disease	# of Cases	Percentage
ARI	1,879,492	28%
Bloody diarrhoea	20,265	<0.5%
Acute diarrhoea	407,754	6%
S. Malaria	310,699	5%
Skin Diseases	253,437	4%
Unexplained fever	223,198	3%
<b>Total (All consultations)</b>	<b>6,708,328</b>	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-8, 2013.



Major health events reported during the Epi-week - 8 (17 to 23 Feb 2013)

Disease	# of Cases	Percentage
ARI	244,051	27%
Bloody diarrhoea	2,426	<0.5%
Acute diarrhoea	58,040	6%
S. Malaria	43,544	5%
Skin Diseases	33,340	4%
Unexplained fever	29,634	3%
<b>Total (All consultations)</b>	<b>918,692</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 (8/2013) Outbreaks:

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
18-Feb	Measles	Balochistan	Jaffarabad	Goth Imdad Chalgari, UC Chalgari, Tehsil Jhat Pat	1	0	4	0	Alert for 5 suspected Measles cases were reported. During household survey 17 children checked out of which 13 were immunized against BCG. Information shared with DoH and requested for sending vaccination team for outreach vaccination.
19-Feb	Measles	Balochistan	Nasirabad	Ghot Dr Abdul Wahab Sarpara Balan Shakh	4	0	1	0	Alert for 5 suspected Measles cases were reported, all cases had received measles vaccination. Vit-A provided. Information shared with DHO and DSV.
22-Feb	Pertussis	Balochistan	Chagai	Gowalisht aap, UC Nokundi	0	6	0	7	Alert for 13 cases of probable Pertussis cases were reported. During investigation community was sensitized for routine immunization and health and hygiene sessions were conducted. Erythromycin advised to the health facility staff for the contacts also. Information shared with DHO.
22-Feb	Pertussis	Balochistan	Killa Saifulah	Killi Colony, UC Nasai, Tehsil Muslim Bagh	1	4	2	3	Alert for 10 probable Pertussis cases were reported. During active search no more cases were found in the area, health and hygiene session conducted in the community along with importance of immunization. Erythromycin advised to the health facility staff for the contacts also. Information shared with DOH.
19-Feb	Measles	FATA	Khyber Agency	Village Chirat killi, UC Kambila, Tehsil Mullagori	2	3	2	3	Alert for suspected Measles cases were reported from BHU Kambila. On active surveillance a total of 10 suspected measles cases were identified. Vitamin-A was given to suspected measles cases. A blood sample was taken and sent to NIH. Health education was imparted. During Mass Measles vaccination campaign a total of 290 children were vaccinated. Information shared with Agency Surgeon and FSMO.
21-Feb	Measles	FATA	Khyber Agency	Village Ali Mat shah Qari, UC Khoga khel 2, Tehsil Landikotal	2	0	2	1	Alert for suspected Measles cases was reported from AHQ Hospital, Landikotal. On active surveillance 5 suspected measles cases were identified. Vitamin-A was given to all the suspects. Health education session was imparted. During Mass Measles vaccination campaign a total of 38 children were vaccinated. Information shared with Agency Surgeon and FSMO.
21-Feb	Measles	FATA	Momand Agency	Villages Bakero Kale, Oorya & Sundai, Tehsil Prang Ghaar	2	1	2	2	Alert for 8 suspected Measles cases reported from 3 different locations, Vitamin-A drops were provided to all the suspects. The vaccination status of 12 children under five years was assessed and it was found that only two of them had BCG scars. Two blood samples and one throat swab was collected and sent to NIH. Information shared with FSMO and Agency Surgeon.
19-Feb	AJS	Khyber Pakhtunkhwa	Swat	Mingora and saidu Sharif, Tehsil babuzai.	0	36	0	3	Alert for increase number of AVH cases reported from STH, Saidu Sharif. Active surveillance conducted with collaboration of PPHI and DoH. 39 cases has been identified from different parts of the city. Awareness campaign through the local newspaper and FM radio by the DHO and AC/Administrator municipality. Health and hygiene sessions conducted in Schools and Madrassas. Mapping of the cases in context of water supply schemes with the municipality and cleaning of the water tanks, replacement or repair of the damaged water supply pipes done by the municipality and chlorination at high concentration was advised.
22-Feb	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village Pirali & alamkhan, UC Qasim, Tehsil Takht Bhai	2	2	3	2	Alert of Cutaneous Leishmaniasis was reported from UC Qasim. Active surveillance was conducted and 8 more clinical cases were identified in the area and surroundings. Inj- Glucantime were placed in nearby health facility for all registered cases. FPHC Mardan, Relief Int, 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 area. Information shared with EDO Health
17-Feb	Measles	Khyber Pakhtunkhwa	D. I. Khan	Bilal Colony, Thoya Fazil	0	1	2	1	Alert for 2 suspected cases of Measles. During active surveillance in the area 3 more suspected Measles cases were found. Vit-A to all the suspects were provided. A total of 20 house holds visited, while unvaccinated cases were recorded and sent to nearby health center for vaccination. Follow up visit planned.

Current week's (8/2013) Outbreaks:

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
18-Feb	Measles	Khyber Pakhtunkhwa	Haripur	Nawansher, Abbottabad	1	0	1	1	Alert for 3 suspected Measles cases was reported from Nawansher. Gave vitamin-A to all the suspects. During field investigation found 11/38 children unvaccinated for measles 2 vaccine and 8 children missing for measles 1 vaccine, while no more measles cases were identified. Missed children sent to nearest health facility for vaccination. Health and hygiene session was conducted. Information shared with EDO Health.
19-Feb	Measles	Khyber Pakhtunkhwa	Haripur	Village Mankarai	1	0	0	0	Alert for 1 measles case reported from village Mankarai. Vitamin-A provided. Field investigation found 7/22 children unvaccinated for measles 2 vaccine and 6 children missing for measles 1 vaccine. All the unvaccinated children sent to the nearest health facility for vaccination. Health and hygiene session was conducted. Information shared with EDO Health.
20-Feb	Measles	Khyber Pakhtunkhwa	Lower Dir	Village Shaga, Karodarra, UC & Tehsil Wari, Dir Upper	0	3	0	3	Alert for 6 suspected Measles cases reported from DHQ Hospital. Health education session was conducted with the family and Vit-A drops were given to all the suspects.
21-Feb	Measles	Khyber Pakhtunkhwa	Lower Dir	Village Guldherai, UC Munjai Tehsil Balambat, Dir Lower	3	4	1	0	Alert for suspected Measles case reported from DHQ Hospital Dir Lower. Suspected case 60 months old female child developed fever, followed by rash and brought to DHQ hospital. Blood sample collected and sent to NIH. Health education session conducted with the family and Vit-A drops were given to the suspects.
19-Feb	Measles	Khyber Pakhtunkhwa	Mardan	Village Dhery Baba near Charsadda Chowk, Mirwas, Tehsil Mardan	3	0	1	2	Alert for 6 suspected Measles MMC hospital Mardan. Vitamin-A drops were given. Epidemiological assessment carried out in the area and surroundings. 4 more clinical cases were identified in same family, while few recovered cases in the neighbors, most of the children were found partially vaccinated and unimmunized for measles vaccination. All children of less than 5 years were sent to near by health facility for vaccination. EPI team was informed and requested for outreach immunization in the area. Health education session was conducted in the community, LHW's working in the area were involved. Information shared with EDO-H, focal person and EPI Coordinator.
18-Feb	Measles	Khyber Pakhtunkhwa	Swat	UC Nawakalay, Shahdarra, Tehsil Babozai	1	2	2	0	Alert for suspected Measles case reported from SGTH. Detailed history was taken from the patient, vitamin-A drops were provided and blood sample collected and sent to NIH. During active surveillance four more cases were found. Health education session conducted in the community regarding the importance of routine immunization. EDO Health and Coordinator EPI informed.
20-Feb	Measles	Khyber Pakhtunkhwa	Swat	Village sheryary, UC Gulkada, Tehsil Babozai	1	0	3	2	Alert for suspected Measles case from SGTH. Detailed history was taken from the patient, vitamin-A drops were provided and blood sample collected and sent to NIH. During active surveillance in the area 5 more cases were found. Health education session conducted with the community regarding the importance of routine immunization. Information shared with EDO Health and Coordinator EPI.
22-Feb	Measles	Punjab	Bhakkar	UC Gadola, Tehsil Bhakkar	1	2	2	0	Alert for 2 suspected cases of measles reported from 2 different locations of UC Gadola. Suspected cases were given single dose of Vitamin A & second dose was ensured after 24 hours. Community was provided awareness through health education session for highlighting importance of vaccination of their children against all the EPI diseases. General hygiene and isolation measures were demonstrated to the community. Community was also provided awareness about importance of isolation of the cases from healthy children to halt the spread of disease. EDO (H) was informed.
20-Feb	Measles	Punjab	Lahore	Aziz Bhatti Town - UC 41, UC 48, UC 45	3	1	4	0	Alert for 5 suspected Measles cases were reported from Children and Services hospital. The suspected cases were given 1st dose of vitamin-A at these Hospitals while vaccinator and LHS were requested to deliver 2nd dose on next day. During active surveillance 3 more cases were found in the area. 25 children were assessed for routine EPI coverage where 7 children were found to have missed second dose of Measles. Vaccinator was requested to ensure 100% EPI vaccination in the area. Blood samples of the suspected cases were drawn and throat swabs were taken and sent to NIH. Health education session conducted with the help of LHS in the area. Information shared with EDO(H) and Director EPI.

Figure-3: Number of alerts received and responded, week 5 - 8, 2013

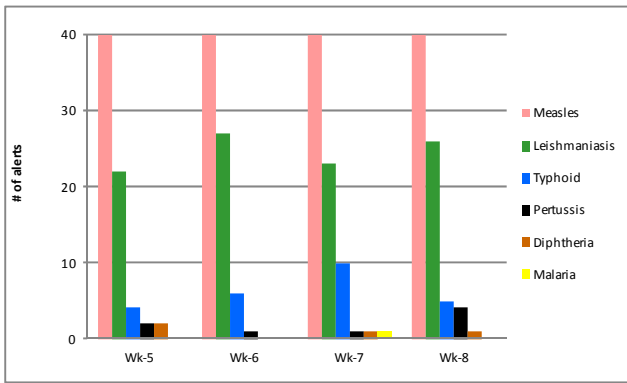
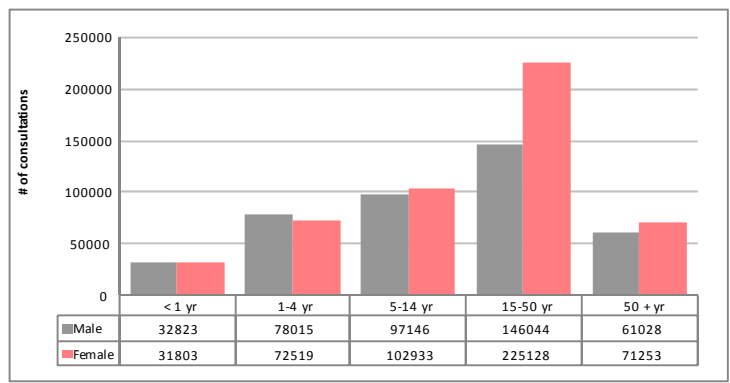


Figure-4: Number of consultations by age and gender, week 8, 2013



### Province Khyber Pakhtunkhwa:

461 health facilities from 15 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 123,479 patients consultations reported in week 8, 2013. Total 63 alerts were received and appropriate measures were taken. Altogether 49 alerts for Measles; 12 for Leishmaniasis; while 1 each for Diphtheria and Acute Jaundice Syndrome. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

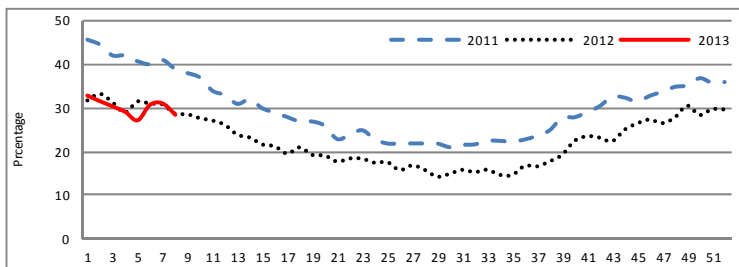
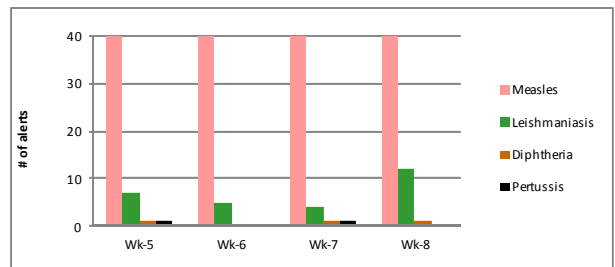


Figure-6: Number of alerts received and responded week 5 to 8, 2013



### Province Sindh:

1007 health facilities from 23 districts in Sindh province reported to DEWS with a total of 457,821 patients consultations in week 8, 2013. Total 4 alerts were received and appropriate measures were taken. Altogether 2 alerts were for Leishmaniasis; while 1 each for NNT and Bloody diarrhoea. ARI trend showing decrease as compared with last week.

Figure-7: Trend of ARI, province Sindh

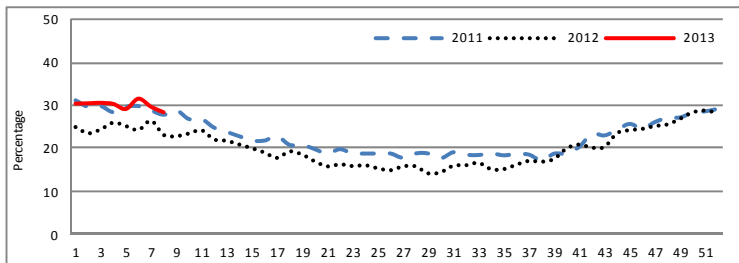
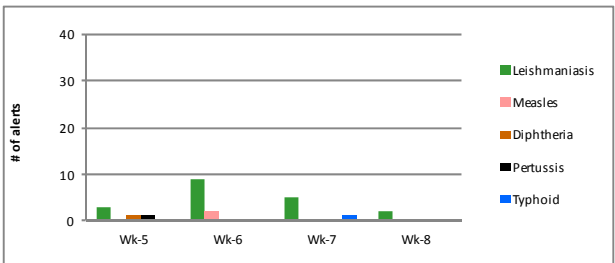


Figure-8: Number of alerts received and responded, week 5 to 8, 2013



### Province Punjab:

493 health facilities from 9 districts in province Punjab reported to DEWS with a total of 219,076 patients consultations in week 8, 2013. Total 26 alerts were received and appropriate measures were taken. Altogether 20 for Measles; 2 each for Typhoid and NNT; while 1 each for Acute diarrhoea and ARI. ARI trend showing increase as compared with last week.

Figure-9: Trend of ARI, province Punjab

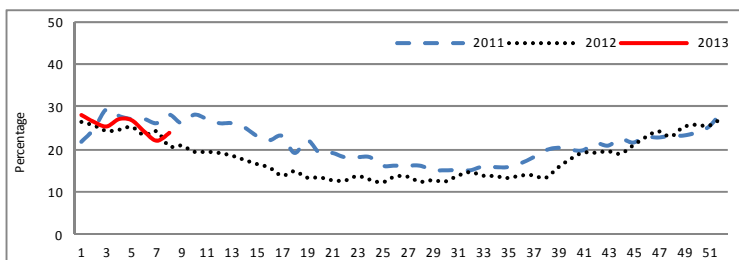
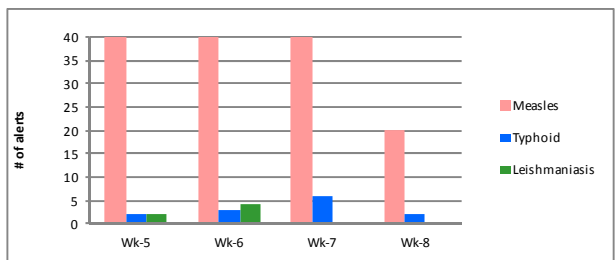


Figure-10: Number of alerts received and responded, week 5 to 8, 2013



**Province Balochistan:**

389 health facilities from 21 districts in province Balochistan reported to DEWS with a total of 57,831 patients consultations in week 8, 2013. Total 30 alerts reported and appropriate measures were taken in week 8, 2013. Altogether 14 alerts were for Measles; 8 for Leishmaniasis; 3 each for Pertussis and Typhoid; while 2 for ARI. ARI trend showing increase as compared with last week.

Figure-11: Trend of ARI, province Balochistan

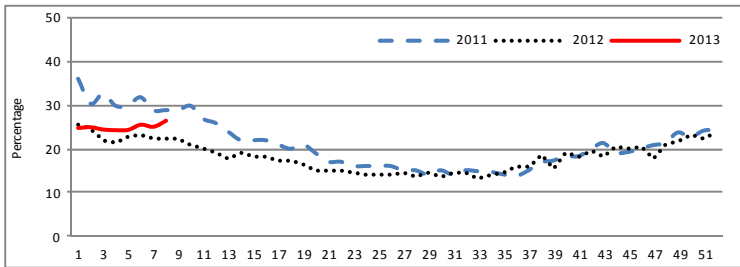
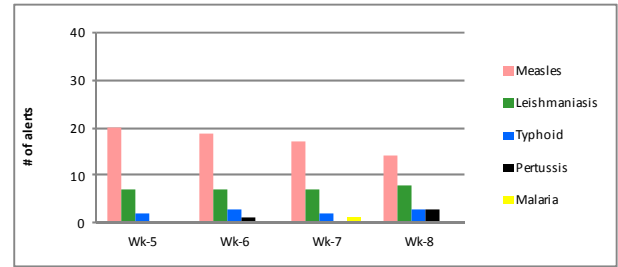


Figure-12: Number of alerts received and responded, week 5 to 8, 2013



**Province Gilgit Baltistan:**

50 health facilities from 5 districts in Gilgit Baltistan reported to DEWS with a total of 19,206 patients consultations in week 8, 2013. 1 alert for Measles was reported in week 8, 2012. ARI showing decrease as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

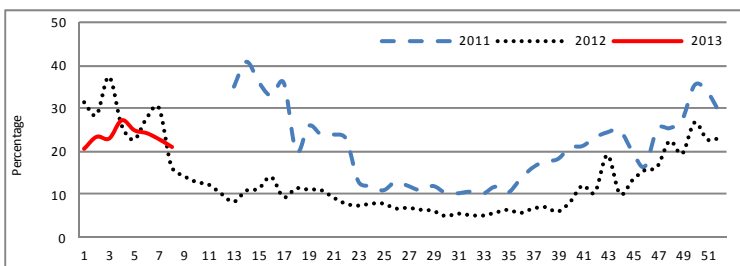
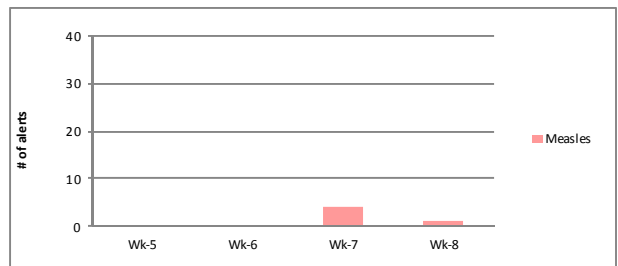


Figure-14: Number of alerts received and responded, week 5 to 8, 2013



**FATA:**

56 health facilities from 3 agencies in FATA reported to DEWS with a total of 13,292 patients consultations in week 8, 2013. 14 alerts, 6 for Measles; 4 for NNT; 3 for Leishmaniasis; while 1 for Pertussis were reported in week 8, 2012 and appropriate measures were taken. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

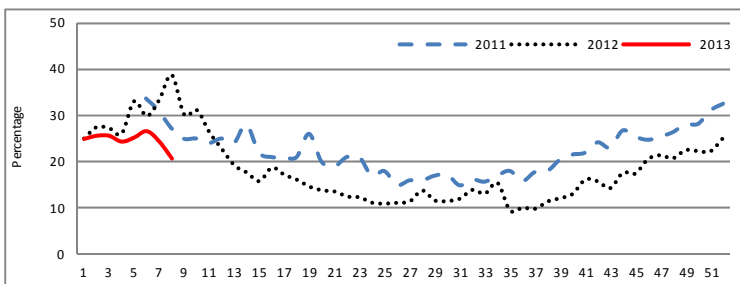
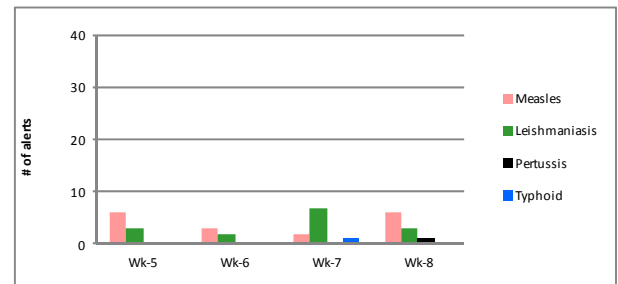


Figure-16: Number of alerts received and responded, week 5 to 8, 2013



**State of Azad Jammu and Kashmir:**

92 health facilities from 9 districts in AJ&K reported to DEWS with a total of 22,371 patients consultations in week 8, 2013. 7 alerts, 6 for Measles and 1 for Leishmaniasis were received and appropriate measures were taken. ARI trend showing decrease as compared with last week.

Figure-17: Trend of ARI, AJ&K

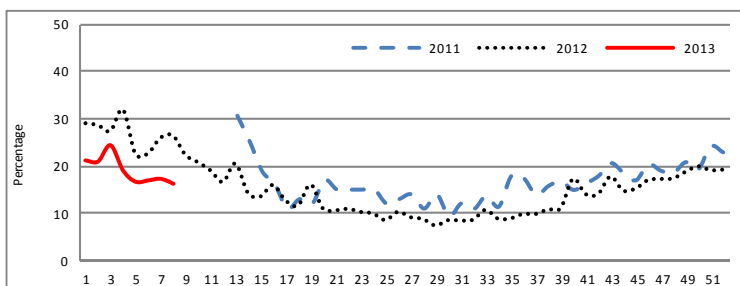


Figure-18: Number of alerts received and responded, week 5 to 8, 2013

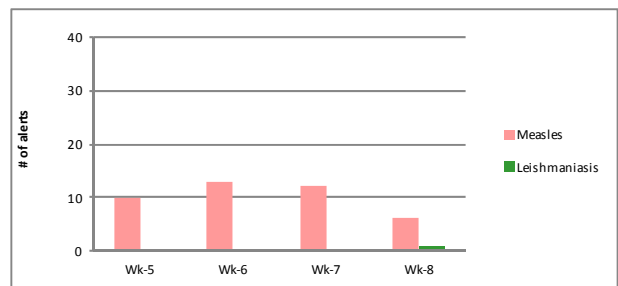


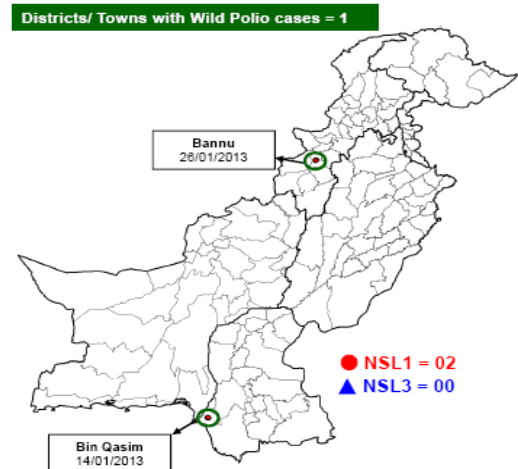
Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 8, 2013		2013 (Total up till week - 8)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	0	0	4	1
Acute jaundice syndrome	113	22	1	1	8	3
Bloody diarrhoea	146	11	1	0	6	1
CCHF	68	41	0	0	2	1
Dengue fever	175	29	0	0	0	0
Diphtheria	60	16	1	0	11	1
Measles	5922	812	96	16	1179	168
Pertussis	366	147	4	2	14	4
NNT + tetanus	560	0	7	0	41	0
Malaria	136	68	0	0	3	2
Leishmaniasis	900	78	26	1	185	26
Others	1529	58	9	0	76	1
<b>Total</b>	<b>10610</b>	<b>1453</b>	<b>145</b>	<b>20</b>	<b>1529</b>	<b>208</b>

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

- In week 8, 2013, no new wild polio case was reported from any district. The total number of polio cases for year 2013 remains 2 type-1, while, 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).

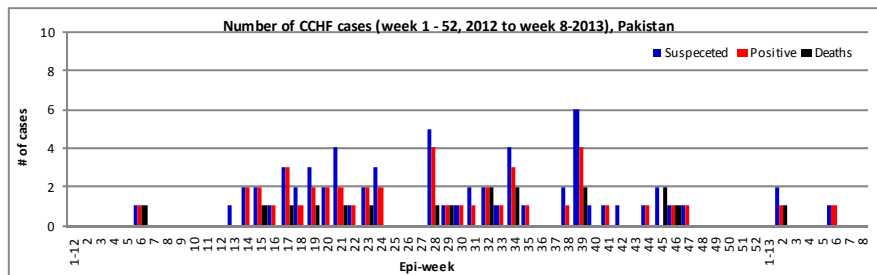
Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	-	-	-
Sindh	4	-	-	1	-	-
Khyber Pakhtunkhwa	27	-	-	1	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
<b>Total</b>	<b>55</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>



**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 8, 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 within the normal range and discharged from hospital. The case has 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

**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 reduces 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 8 (23 Feb 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 8)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	69	4	139	0
Balochistan	447	119	1816	31	239	41	986	42
FATA	211	31	559	13	42	11	150	1
Gilgit Baltistan	40	1	54	0	7	0	18	0
ICT	27	2	63	0	10	2	44	1
Khyber Pakhtunkhwa	1989	108	3542	38	319	48	808	16
Punjab	809	40	1329	16	382	38	1768	16
Sindh	2234	505	7353	212	111	24	2354	107
Total	5922	812	14984	310	1179	168	6267	183

Alerts and outbreaks, week 8, 2013

