



Highlights

*Epidemiological week no. 9
(24 February to 2 March, 2013)*

- **Measles:** This week a total of 95 alerts investigated, responding and monitoring to 8 outbreaks. 508 measles cases from 32 districts, while 8 deaths reported from 6 districts. Vitamin-A drops provided to all the suspects and district health teams took action to improve vaccination in affected areas.
- **80 districts** and 2469 health facilities have reported to DEWS this week 8, compared with 85 districts with 2566 health facilities shared weekly data in week 8, 2013 to the Disease Early Warning System (DEWS).
- **919,312** patients' consultations were reported in week 9, 2013 compared to **918,682** consultations reported in week 8, 2013.
- Altogether **152** alerts were investigated and response were provided to **12** outbreaks.

Figure-1: 80 districts reported to DEWS in week 9, 2013



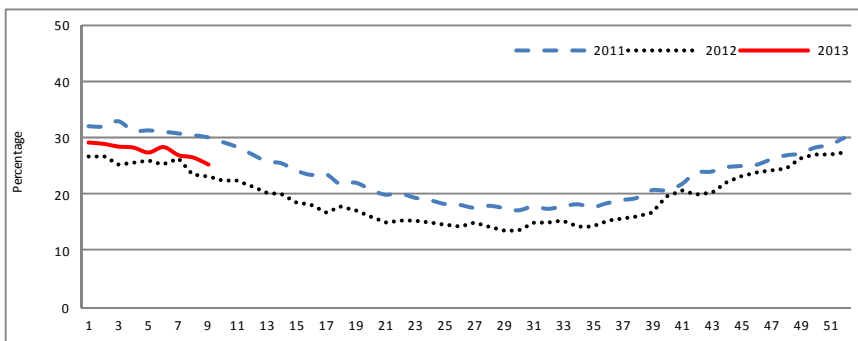
Priority diseases under surveillance in DEWS

- 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 9, 2013 (29 Dec 2012 to 2 March 2013)

Disease	# of Cases	Percentage
ARI	2,114,831	28%
Bloody diarrhoea	22,471	<0.5%
Acute diarrhoea	469,161	6%
S. Malaria	355,817	5%
Skin Diseases	287,923	4%
Unexplained fever	253,307	3%
Total (All consultations)	7,638,816	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-9, 2013.



Major health events reported during the Epi-week - 9 (24 Feb to 2 Mar 2013)

Disease	# of Cases	Percentage
ARI	232,409	25%
Bloody diarrhoea	2,157	<0.5%
Acute diarrhoea	60,813	7%
S. Malaria	44,935	5%
Skin Diseases	34,178	4%
Unexplained fever	29,380	3%
Total (All consultations)	919,312	

- 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 (9/2013) Outbreaks:

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
25-Feb	Leishmaniasis	AJK	Bagh	vill Sohawa UC chiralal tehsil dhirkot	0	5	0	7	Alert for Cutaneous Leishmaniasis reported from BHU Sohawa. Upon investigation there were 12 cases from different villages but from same UC were found. Injection Glucantime were provided to the cases. Health education session was conducted with the patients for their personal protection from sand fly as well as screening of doors and windows. Information shared with DOH and CDC department.
27-Feb	Measles	Balochistan	Kech	Asiyaabad, UC Nazarabad, Tehsil Tump	3	2	6	7	Alert for 8 suspected Measles cases were reported. During field investigation 10 more cases were found in the area. First dose of Vitamin-A given, and second dose were provided to all the suspects for next day. House to house survey conducted and 19 houses were checked. A total of 32 children found unvaccinated and sent to nearest health facility for vaccination. Information shared with DHO.
28-Feb	Measles	Balochistan	Zhob	Kili Loi Sharana UC Shaghaloo Tehsil Qamar Din Karez District Zhob	4	2	5	0	Alert for 11 cases suspected cases reported from DHQ Hospital Zhob, while 3 deaths due to suspected measles were reported in the area. Cases investigated and responded. Patient had fever and cough with rash. All the patients were admitted at Paeds ward DHQ Hospital. No more cases reported from the community. 05 blood samples have been taken and sent NIH.
26-Feb	Leishmaniasis	FATA	Khyber Agency	Village Hamdard killi, UC Janbaz, Tehsil Bara	23	41	30	66	Alert for suspected Cutaneous Leishmaniasis reported from BHU Janbaz Killi. A total of 160 suspects were line listed. Health education was imparted. LLINs bed nets were provided to the affected families. Injection Glucantime was provided to the patients. Information shared with Agency surgeon and PPHI.
27-Feb	Leishmaniasis	FATA	Mohmand Agency	Village Shah Baig, Tehsil Halimzai	0	0	2	2	Alert for Cutaneous Leishmaniasis reported from CD Shah Baig. during active surveillance 1 more case was found in the area. Health education session conducted in the community. The malaria control program will be contacted regarding vector control measures. Information shared with Agency Surgeon.
27-Feb	Leishmaniasis	Khyber Pakhtunkhwa	Mardan	Village & UC Kohi Bermol, Tehsil Katlang, Mardan	0	2	1	3	Alert for Cutaneous Leishmaniasis reported from UC Kohi Bermol, Tehsil Katlang. During active surveillance 5 more clinical cases were identified in the area and surrounding. Required doses of Inj Glucantime were provided in the health facility for all registered cases. FPHC Mardan, Relief Int, PPHI were requested for vector control interventions in the area. On the job training of health staff was conducted for Intralesional administration of Inj Glucantime. EDO Health and focal person was informed.
25-Feb	Measles	Khyber Pakhtunkhwa	Haripur	Khalabut township	2	0	3	0	Alert for 3 suspected measles cases were reported from Khalabut Township. Vitamin-A provided. During field investigation 14 children found unvaccinated for measles 2 vaccine and 6 children missing for measles 1 vaccine. On active case finding no more cases were identified with active measles. Missed children sent to nearest health facility for vaccination. Health and hygiene session conducted in the community. In formation shared with EDO Health.
25-Feb	Measles	Khyber Pakhtunkhwa	Mardan	Shahidano Mohalla, UC Gulibagh, Tehsil Mardan	1	1	1	3	Alert for suspected Measles reported from DHQ hospital Mardan, 2 patients from same family admitted at isolation unit of children ward and found unvaccinated. Blood samples were collected and sent to NIH. Vitamin-A were given. During active surveillance 4 more clinical cases were identified in same family and surrounding, 90% of cases were found unvaccinated. All unvaccinated children were sent to near by 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. Information shared with EDO-H, Focal person and EPI Coordinator.
25-Feb	Measles	Khyber Pakhtunkhwa	Swat	Mohallah Bangladesh, UC landaikas, tehsil Babuzai	3	0	2	0	Suspected measles cases were reported from Mohallah Bangladesh, UC Landikass. On active surveillance five suspected cases were found. Vitamin-A provided to all the suspects. Blood sample taken and sent to NIH. Information shared with DHO and Coordinator EPI.
28-Feb	Measles	Khyber Pakhtunkhwa	Swat	Village wrana ghurati, banjoot, UC Akamaruf bameekhal, Tehsil Babozai	4	0	2	0	Alert for suspected Measles cases from village Wrana Ghurati, Tehsil Babozai. Detailed history was taken from the patient, vitamin-A drops provided and blood sample collected and sent to NIH. During active surveillance 5 more cases were found. Health education session conducted in the community regarding the importance of routine immunization. Information shared with EDO Health and Coordinator EPI.
26-Feb	Measles	Khyber Pakhtunkhwa	Upper Dir	Village Bara Jellar, UC Jellar, Tehsil, Wari, Dir Upper	1	1	2	1	Alert for suspected Measles case reported from DHQ Hospital, Dir Lower, the case belongs to village Bara Jellar, UC Jellar. Detailed history taken and found unvaccinated. Blood sample collected and sent to NIH. Health education session conducted with the family and Vit-A drops given to all the suspects.
24-Feb	Measles	Punjab	Lahore	Gulberg Town uc 97, uc 127, uc 130, uc 76	15	5	12	3	Alert for 25 suspected Measles cases reported from different Teaching Hospitals of Lahore, given 1st dose of Vitamin-A, while vaccinators were requested to give 2nd dose on next day. During active surveillance 10 more cases were found in different union councils. 14 children were found missed second dose of Measles. Mass vaccination campaign arranged in the nearest health facility and 312 children were vaccinated. 5 blood samples and Throat swabs were taken and sent to NIH. Health education session conducted in the community with the help of LHWs, religious and community Leaders. Information shared with DCO office Lahore.

Figure-3: Number of alerts received and responded, week 6 - 9, 2013

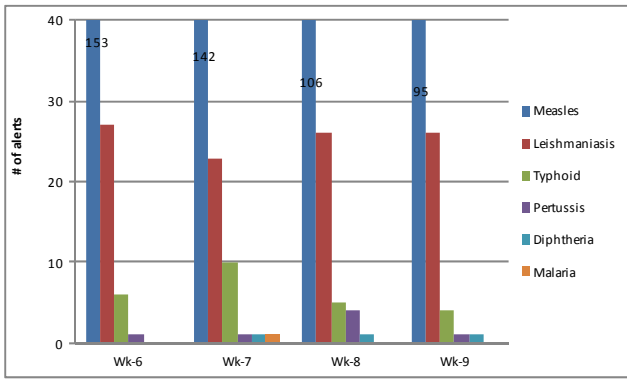
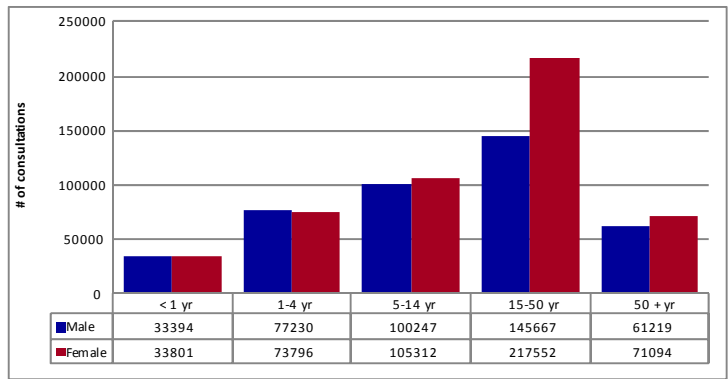


Figure-4: Number of consultations by age and gender, week 9, 2013



Province Khyber Pakhtunkhwa:

417 health facilities from 13 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 105,256 patients consultations reported in week 9, 2013. Total 66 alerts were received and appropriate measures were taken. Altogether 43 alerts for Measles; 14 for Leishmaniasis; 4 for NNT; 2 for H1N1; while 1 each for AWD, Rabies and Typhoid. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

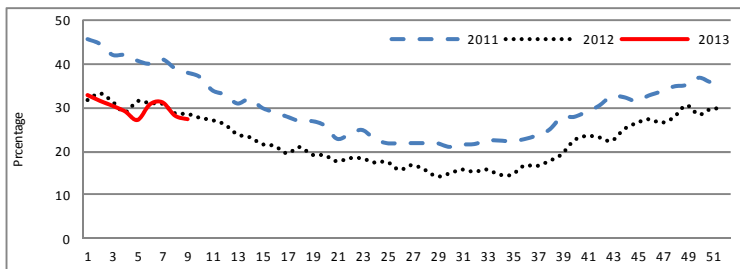
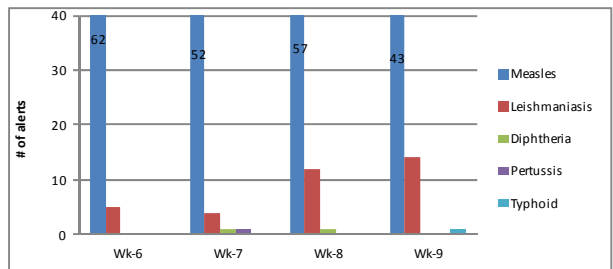


Figure-6: Number of alerts received and responded week 6 to 9, 2013



Province Sindh:

1011 health facilities from 23 districts in Sindh province reported to DEWS with a total of 468,810 patients consultations in week 9, 2013. Total 13 alerts were received and appropriate measures were taken. Altogether 7 alerts were for NNT; 3 for Leishmaniasis; 2 for AWD; while 1 for Pertussis. ARI trend showing decrease as compared with last week.

Figure-7: Trend of ARI, province Sindh

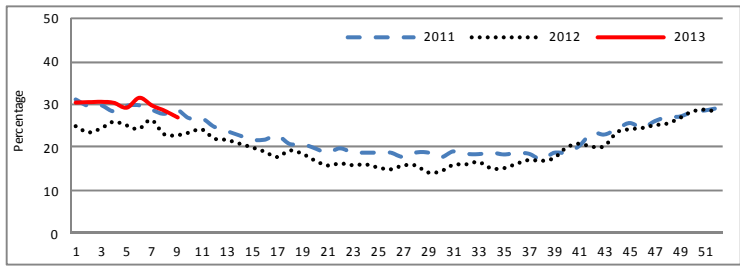
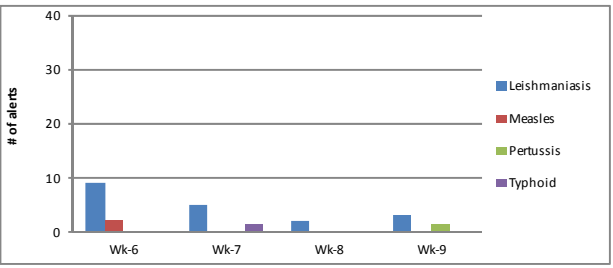


Figure-8: Number of alerts received and responded, week 6 to 9, 2013



Province Punjab:

490 health facilities from 9 districts in province Punjab reported to DEWS with a total of 238,414 patients consultations in week 9, 2013. Total 35 alerts were received and appropriate measures were taken. Altogether 26 alerts were for Measles; 3 for ARI; 2 each for Acute diarrhoea and Typhoid; while 1 each for Diphtheria and Tetanus. ARI trend showing minor decrease as compared with last week.

Figure-9: Trend of ARI, province Punjab

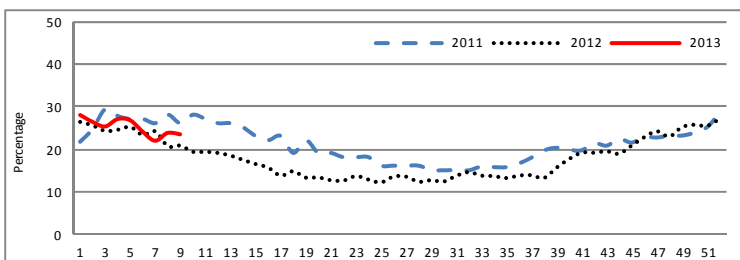
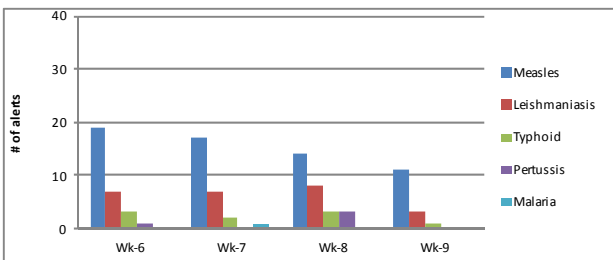


Figure-10: Number of alerts received and responded, week 6 to 9, 2013



Province Balochistan:

354 health facilities from 18 districts in province Balochistan reported to DEWS with a total of 50,503 patients consultations in week 9, 2013. Total 15 alerts reported and appropriate measures were taken in week 9, 2013. Altogether 11 alerts were for Measles; 3 for Leishmaniasis; while 1 for Typhoid. ARI trend showing decrease as compared with last week.

Figure-11: Trend of ARI, province Balochistan

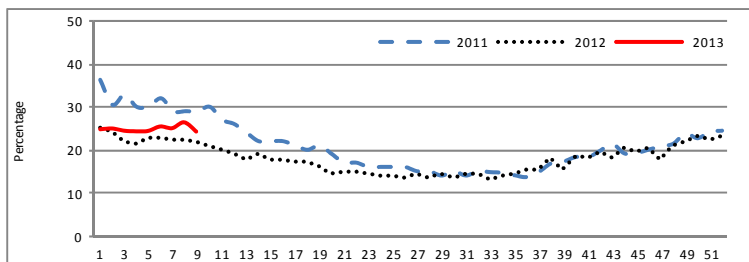
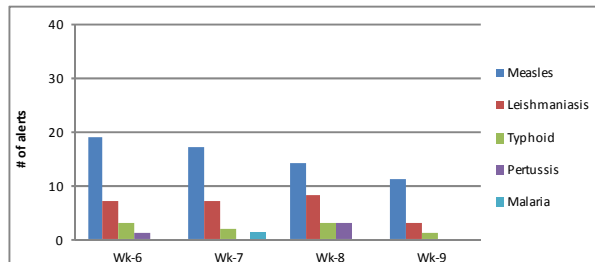


Figure-12: Number of alerts received and responded, week 6 to 9, 2013



Province Gilgit Baltistan:

41 health facilities from 5 districts in Gilgit Baltistan reported to DEWS with a total of 19,360 patients consultations in week 9, 2013. 4 alerts for Measles were reported in week 9, 2012. ARI showing decrease as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

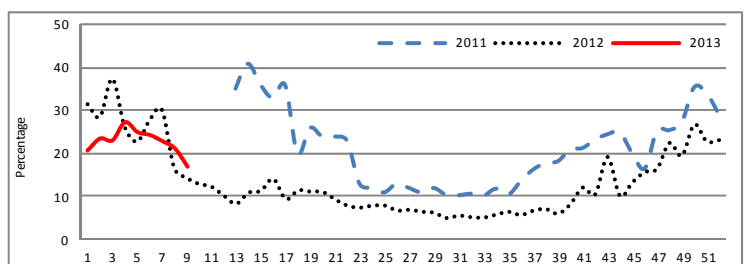
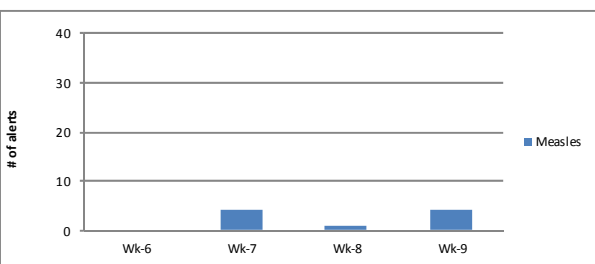


Figure-14: Number of alerts received and responded, week 6 to 9, 2013



FATA:

53 health facilities from 3 agencies in FATA reported to DEWS with a total of 12,492 patients consultations in week 9, 2013. 9 alerts, 4 for Leishmaniasis; 3 for Measles; while 2 for NNT were reported in week 9, 2012 and appropriate measures were taken. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

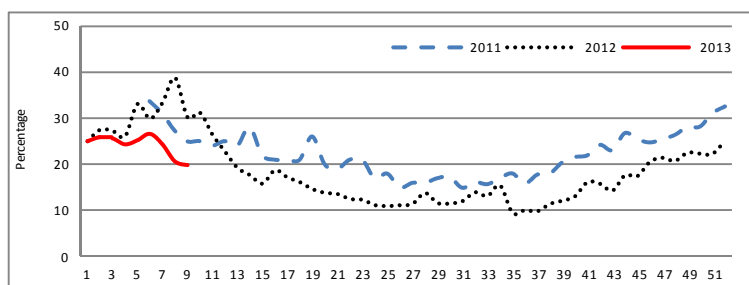
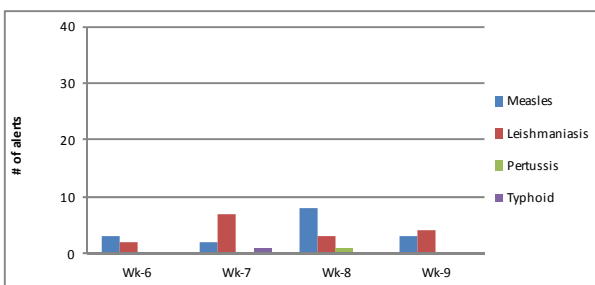


Figure-16: Number of alerts received and responded, week 6 to 9, 2013



State of Azad Jammu and Kashmir:

90 health facilities from 8 districts in AJ&K reported to DEWS with a total of 19,914 patients consultations in week 9, 2013. 9 alerts, 7 for Measles and 2 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

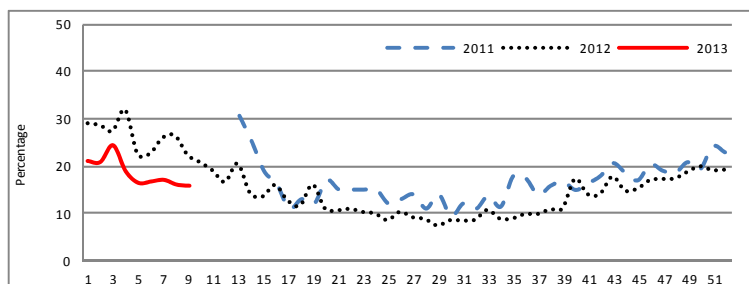


Figure-18: Number of alerts received and responded, week 6 to 9, 2013

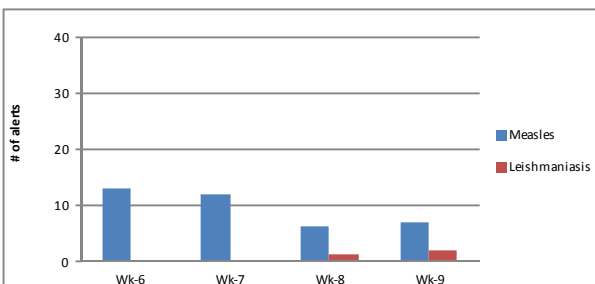
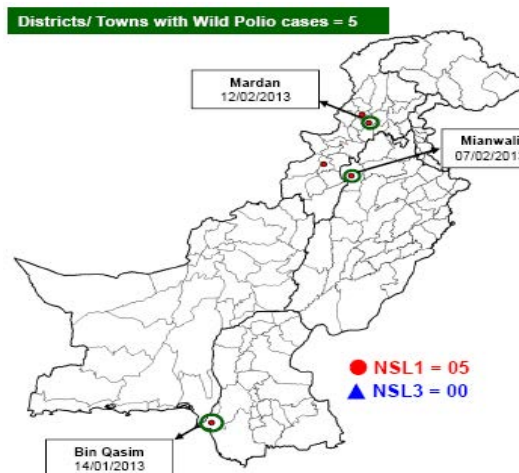


Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 9, 2013		2013 (Total up till week - 9)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	3	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	1	0	12	1
Measles	5922	812	95	8	1306	183
Pertussis	366	147	1	0	15	4
NNT + tetanus	560	0	14	0	55	0
Malaria	136	68	0	0	3	2
Leishmaniasis	900	78	26	4	214	30
Others	1529	58	12	0	95	1
Total	10610	1453	152	12	1722	227

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

- In week 9, 2013, 2 new type-1 wild polio cases were reported in the country, one each from Khyber Pakhtunkhwa (District Mardan) and Punjab (District Mianwali). This brings the total number of polio cases and infected districts in the country to 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).

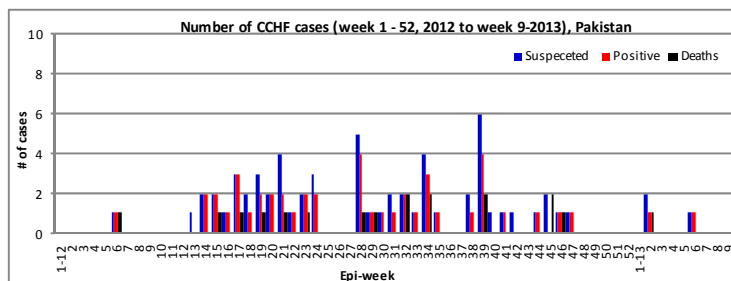


Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	1	-	-
Sindh	4	-	-	1	-	-
Khyber Pakhtunkhwa	27	-	-	3	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	5	-	-

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 9, 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 9 (2 March 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 9)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	78	4	150	0
Balochistan	447	119	1816	31	250	43	1036	45
FATA	211	31	559	13	47	11	156	2
Gilgit Baltistan	40	1	54	0	13		24	0
ICT	27	2	63	0	11	2	45	1
Khyber Pakhtunkhwa	1989	108	3542	38	377	56	921	19
Punjab	809	40	1329	16	410	41	2095	16
Sindh	2234	505	7353	212	120	26	2521	111
Total	5922	812	14984	310	1306	183	6948	194

Alerts and outbreaks, week 9, 2013

