



Highlights

*Epidemiological week no. 17
(21 to 27 Apr, 2013)*

- **Measles:** This week a total of 51 alerts investigated, responding and monitoring 8 outbreaks. 412 measles cases were reporting from 23 districts. Vitamin-A drops provided to all the suspects and district health teams took action to improve vaccination in affected areas.
- **65 districts and 1962 health facilities** have reported to DEWS this week 17, compared with 68 districts with 1909 health facilities shared weekly data in week 16, 2013 to the Disease Early Warning System (DEWS).
- **694,737** patients' consultations were reported in week 17, 2013 compared to **684,959** consultations reported in week 16, 2013.
- Altogether **72** alerts were investigated and response were provided to **9** outbreaks.

Figure-1: 68 districts reported to DEWS in week 17, 2013



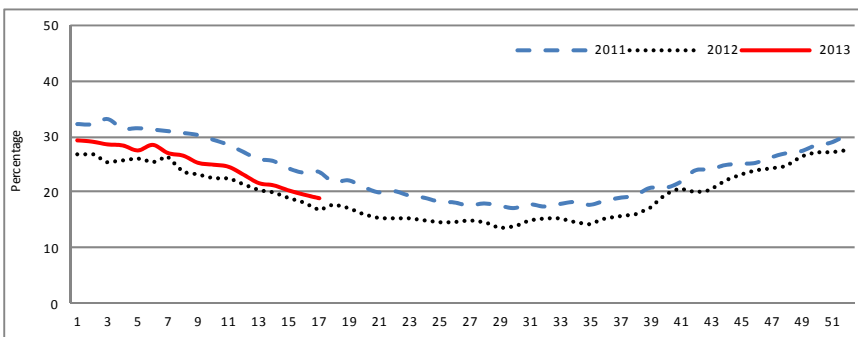
Priority diseases under surveillance in DEWS

- 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 17, 2013 (29 Dec 2012 to 27 Apr 2013)

Disease	# of Cases	Percentage
ARI	3,523,300	25%
Bloody diarrhoea	38,222	<0.5%
Acute diarrhoea	985,694	7%
S. Malaria	651,458	5%
Skin Diseases	527,857	4%
Unexplained fever	461,231	3%
Total (All consultations)	14,049,648	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-17, 2013.



Major health events reported during the Epi-week - 17 (21 to 27 Apr 2013)

Disease	# of Cases	Percentage
ARI	130,864	19%
Bloody diarrhoea	2,078	<0.5%
Acute diarrhoea	64,960	9%
S. Malaria	31,600	5%
Skin Diseases	27,318	4%
Unexplained fever	22,204	3%
Total (All consultations)	694,737	

- 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.

Outbreaks (Wk-17/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
24-Apr	Measles	AJK	Haveli	Vill Palangi UC Kalali Tehsil Kahuta	1	3	2	1	Alert for suspected measles case was reported from a private clinic in district Bagh. The suspected case was found vaccinated against measles. Blood sample was taken and sent to NIH. During investigation 6 more suspected cases (3 recovered and 3 active) were found. Vitamin-A given to all the suspected cases. Out reach vaccination campaign arranged in which 149 children <10years were vaccinated against measles. Health education session conducted in the community. Information shared with DoH and EPI coordinator.
24-Apr	AWD	Balochistan	Kech	Hoory Balghter UC Hoshab, Tehsil Turbat	4	7	1	5	AWD alert reported from village Hoory Balghter, UC Hoshab, Tehsil Turbat. During active surveillance 17 more AWD cases were found. Required medicines was provided to health facility. Patients treated according to plan A and B. Health and hygiene session was conducted. Aqua tabs and ORS were distributed in the community. Information shared with DHMT. Follow-up planned.
22-Apr	Measles	Balochistan	Gwadar	Gahttidoor UC Surbandar, Tehsil Gwadar	1	1	1	2	Alert for 5 suspected Measles cases. During field investigation no more cases were found in the area and surroundings. All the suspected cases were provided Vit-A. In house to house survey found 26 children of under five years, all of the children were found vaccinated for measles. Information shared with DHO.
22-Apr	Measles	Khyber Pakhtunkhwa	Mardan	Village Baba Jee Mohalla, UC Mohib Banda, Tehsil Mardan	1	0	4	1	Alert for suspected Measles was reported from DHQ Hospital, Mardan, the child was admitted at Isolation unit of children ward and found unvaccinated. Vitamin-A was given. During active surveillance in the area and surroundings five more clinical cases were found. All children less than 5 years were sent to nearby health facility for vaccination. EPI team was informed and requested for outreach immunization in the area. 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.
23-Apr	Measles	Punjab	Bhakkar	UC Muslim Kot, Tehsil Bhakkar.	1	3	0	1	Alert for suspected Measles case was reported from UC Muslim Kot, Tehsil Bhakkar. During field investigation 4 more suspected Measles cases were found. Only 1 case out of 5 was found unvaccinated. All suspected cases were given single dose of Vitamin-A, while second dose was ensured after 24 hours. Health education session conducted in the community, highlighting importance of vaccination of children against all the EPI diseases. Information shared with EDO(H).
24-Apr	Measles	Punjab	Bhakkar	UC Bhakkar Urban I, Tehsil Bhakkar.	0	1	2	2	Alert for suspected Measles case reported from DHQ. During investigation 4 more cases suspected cases were found. Out of 5 cases 4 were found vaccinated. All the suspected cases were given single dose of Vitamin-A and second dose was ensured after 24 hours. Health education session conducted in the community. Information shared with EDO(H).
25-Apr	Measles	Punjab	Bhakkar	UC Darya Khan Urban II, Tehsil Darya Khan.	1	2	2	0	Alert for 2 suspected Measles cases were reported from THQ. During investigation 3 more suspected cases were found in the area. Out of 5 cases only 1 case found vaccinated. All the suspected cases were given single dose of Vitamin-A and second dose was ensured after 24 hours. Health education session conducted in the community. Information shared with EDO(H).
26-Apr	Measles	Punjab	Bhakkar	Basti Dalalee, UC Yousaf Shah, Tehsil Bhakkar.	1	0	2	3	Alert for 3 suspected Measles cases admitted in RHC Behal. 2 suspected cases were found un vaccinated. All the suspected cases were given single dose of Vitamin-A and 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. EDO (H) informed.
26-Apr	Measles	Punjab	Lahore	Wahga Town UC 40, UC 42	5	2	2	2	Alert for 8 suspected cases were reported from different Union councils in Lahore. All the suspected cases were given 1st dose of Vitamin-A, while vaccinators were requested to deliver 2nd dose after 24 hours. During active surveillance 3 more cases were found. A total of 100 children were checked for routine EPI coverage where 26 children were found missed their second dose of Measles. Mass vaccination campaign was arranged in the nearest health facility and a total of 77 children were vaccinated. 1 blood sample taken and sent to NIH. Health education session conducted in the community. Information shared with EDO-H.

Figure-3: Number of alerts received and responded, week 14 - 17, 2013

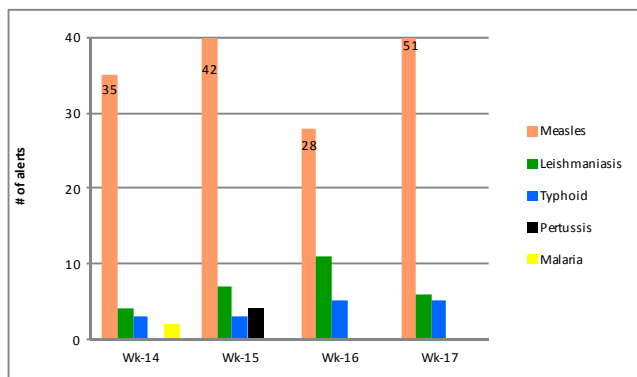
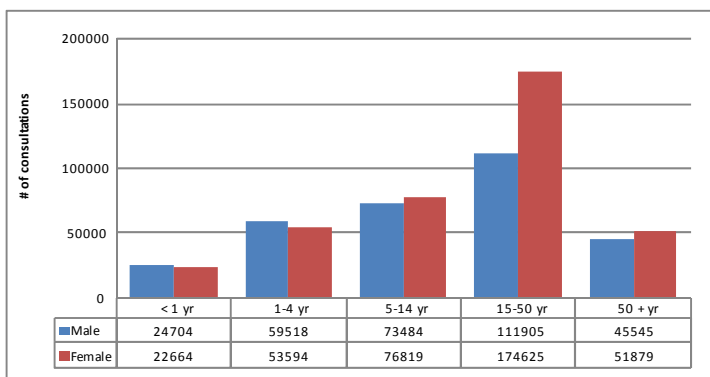


Figure-4: Number of consultations by age and gender, week 17, 2013



Province Khyber Pakhtunkhwa:

203 health facilities from 6 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 66,561 patients consultations reported in week 17, 2013. 13 alerts, 11 were for Measles, while 1 each for Bloody diarrhoea and Leishmaniasis were received and appropriate measures were taken. ARI trend showing decrease as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

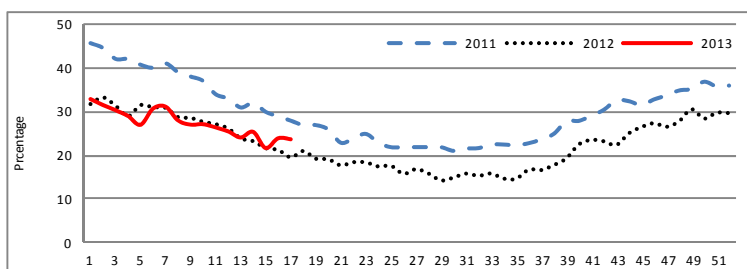
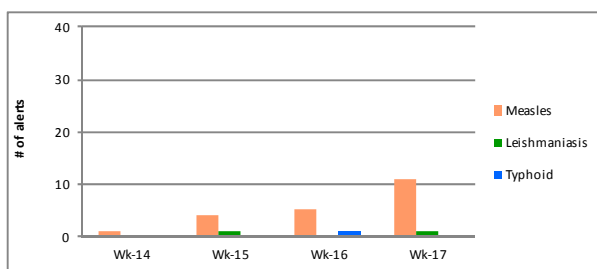


Figure-6: Number of alerts received and responded week 14 to 17, 2013



Province Sindh:

849 health facilities from 23 districts in Sindh province reported to DEWS with a total of 299,925 patient consultations in week 17, 2013. 6 alerts were received and appropriate measures were taken. Altogether 4 alerts were for Leishmaniasis; while 1 each for AWD and NNT. ARI trend showing decrease as compared with last week.

Figure-7: Trend of ARI, province Sindh

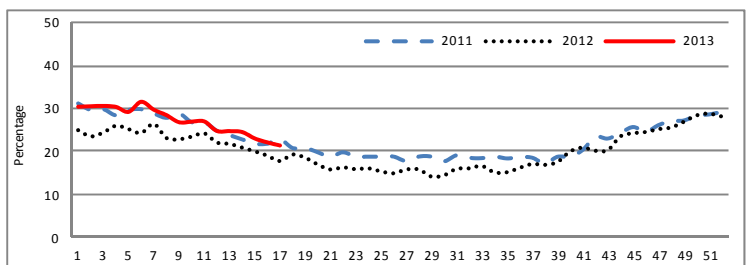
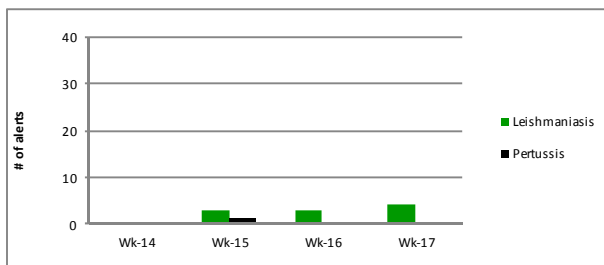


Figure-8: Number of alerts received and responded, week 14 to 17, 2013



Province Punjab:

473 health facilities from 9 districts in province Punjab reported to DEWS with a total of 245,870 patients consultations in week 17, 2013. Total 42 alerts were received and appropriate measures were taken. Altogether 31 alerts were for Measles; 5 for Typhoid; while 3 each for Acute diarrhoea and Bloody diarrhoea. ARI trend showing decrease as compared with last week.

Figure-9: Trend of ARI, province Punjab

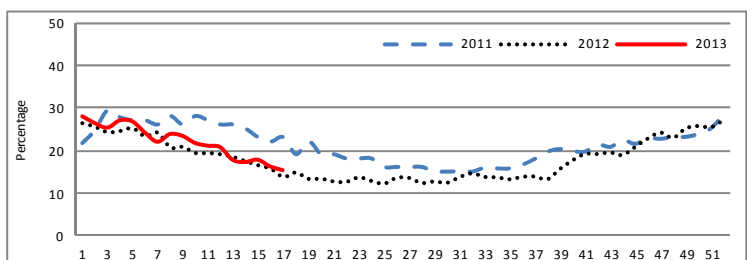
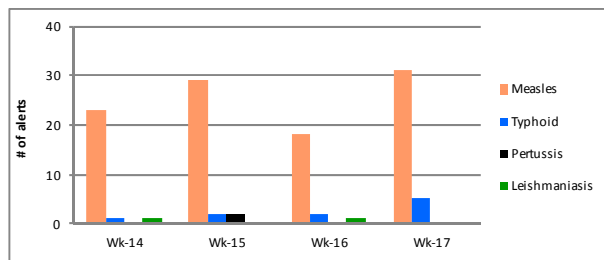


Figure-10: Number of alerts received and responded, week 14 to 17, 2013



Province Balochistan:

262 health facilities from 12 districts in province Balochistan reported to DEWS with a total of 42,254 patients consultations in week 17, 2013. Total 3 alerts reported and appropriate measures were taken in week 17, 2013. Altogether 2 alerts for Measles; while 1 for AWD. ARI trend showing decrease as compared with last week.

Figure-11: Trend of ARI, province Balochistan

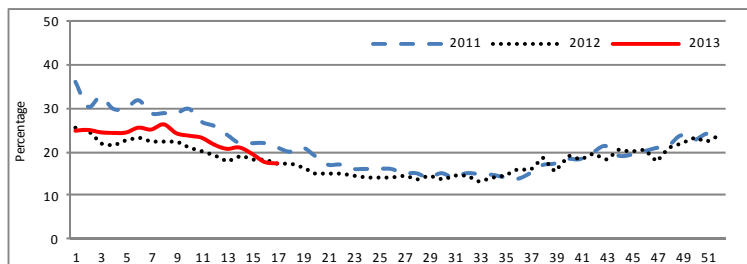
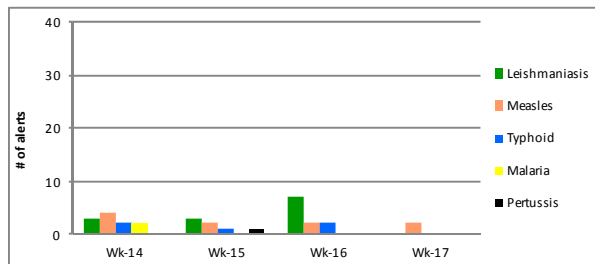


Figure-12: Number of alerts received and responded, week 14 to 17, 2013



Province Gilgit Baltistan:

36 health facilities from 4 districts in Gilgit Baltistan reported to DEWS with a total of 8,324 patients consultations in week 17, 2013. No alerts for any disease was reported in last 8 weeks (Wk 10 to 17), 2012. ARI showing a decrease as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

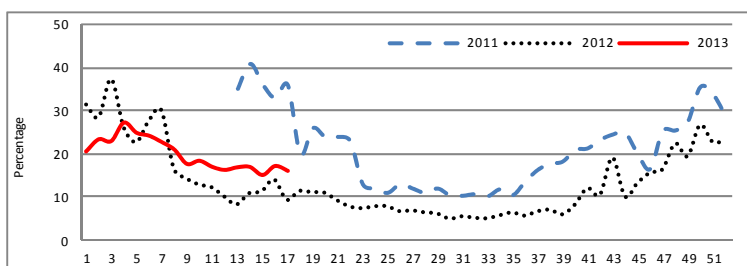
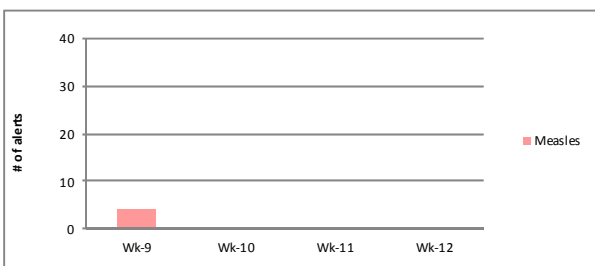


Figure-14: Number of alerts received and responded, week 14 to 17, 2013



FATA:

22 health facilities from 1 agency in FATA reported to DEWS with a total of 5,049 patients consultations in week 17, 2013. No alerts for any disease were reported in week 17, 2013. ARI showing increase as compared with last week.

Figure-15: Trend of ARI, FATA

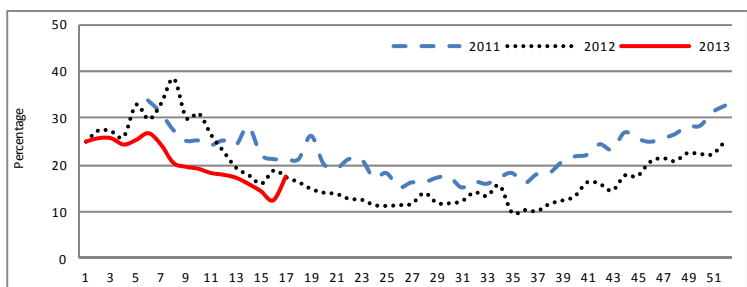
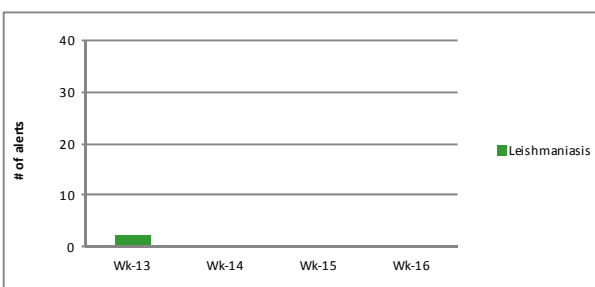


Figure-16: Number of alerts received and responded, week 14 to 17, 2013



State of Azad Jammu and Kashmir:

105 health facilities from 9 districts in AJ&K reported to DEWS with a total of 21,075 patients consultations in week 17, 2013. 7 alerts were reported in week 17, 2013. Altogether 6 alerts were for Measles; while 1 for Leishmaniasis. ARI trend showing minor increase as compared with last week.

Figure-17: Trend of ARI, AJ&K

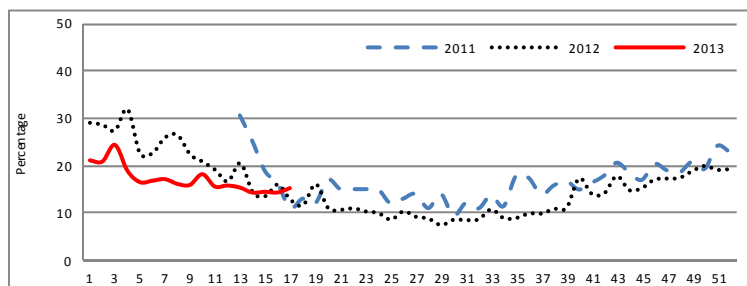


Figure-18: Number of alerts received and responded, week 14 to 17, 2013

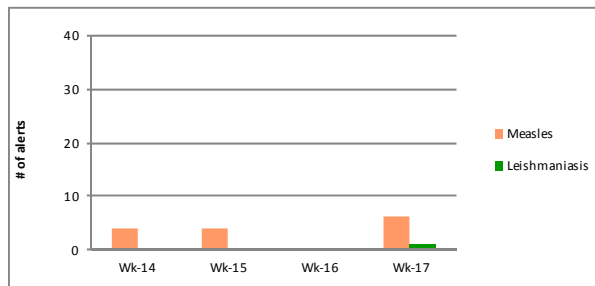
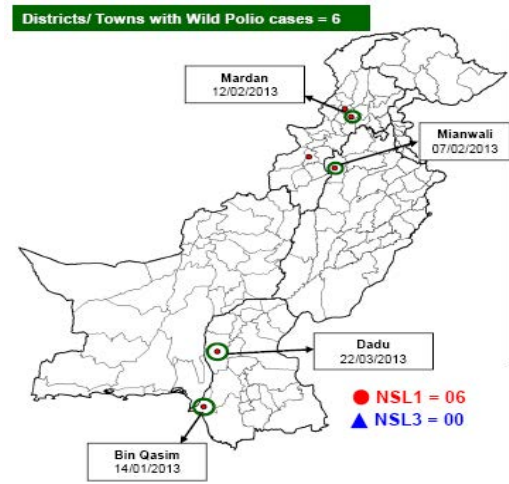


Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 17, 2013		2013 (Total up till week - 17)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	2	1	12	2
Acute jaundice syndrome	113	22	0	0	9	3
Bloody diarrhoea	146	11	4	0	11	1
CCHF	68	41	0	0	7	3
Dengue fever	175	29	0	0	1	0
Diphtheria	60	16	0	0	14	1
Measles	5922	812	51	8	1689	216
Pertussis	366	147	0	0	22	4
NNT + tetanus	560	0	1	0	106	0
Malaria	136	68	0	0	6	2
Leishmaniasis	900	78	6	0	293	37
Others	1529	58	8	0	162	3
Total	10610	1453	72	9	2332	272

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

- In week 17, 2013, no new polio case reported from any district. The total number of polio cases as well as the infected districts/towns in the country for the year 2013 remain 6 (compared to 16 cases from the 10 districts/towns/agencies during the same time period last year).

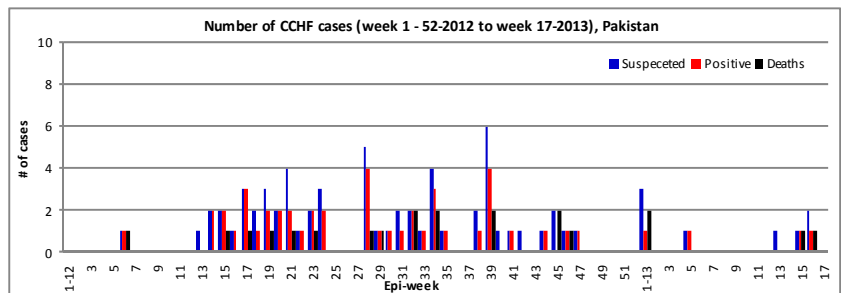


Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	1	-	-
Sindh	4	-	-	2	-	-
Khyber Pakhtunkhwa	27	-	-	3	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	6	-	-

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. 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.

In week 17, 2013, no new CCHF cases were reported from any district; The last 2 cases were in week 16 out of which 1 from district Killasaifullah, Balochistan (Lab confirmed positive, case was expired), and 2nd case belongs to Afghanistan Lab reported negative for CCHF. The expired case was 35 years old male and was a driver by profession found clear contact history with animals, taking care in home and as well as transporting animal in his vehicle from market to different places. A few days ago he delivered some cattle and later on developed high grade fever, body ache with gum bleeding. Platelets count was 8000 only and could not survived. Health session in the community conducted. The total 8 CCHF cases have been reported in year 2013.



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 situation of CCHF cases in 2012-13.

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. There is ongoing trade of animals and animal skins with movement intra Pakistan and between neighboring countries (Afghanistan and Iran).

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 17 (27 April 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 17)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	123	7	258	1
Balochistan	447	119	1816	31	271	47	1116	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	28	2	97	1
Khyber Pakhtunkhwa	1989	108	3542	38	478	67	1178	19
Punjab	809	40	1329	16	613	57	4070	36
Sindh	2234	505	7353	212	111	24	3106	141
Total	5922	812	14984	310	1689	216	10020	246

