



### Highlights

*Epidemiological week no. 18  
(28 Apr to 4 May 2013)*

- **Measles:** This week a total of 91 alerts investigated. 425 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.
- **66 districts** and 1913 health facilities have reported to DEWS this week 18, compared with 65 districts with 1962 health facilities shared weekly data in week 17, 2013 to the Disease Early Warning System (DEWS).
- **643,119** patients' consultations were reported in week 18, 2013 compared to **694,737** consultations reported in week 17, 2013.
- Altogether **110** alerts were investigated and response were provided to **7** outbreaks.

Figure-1: 66 districts reported to DEWS in week 18, 2013



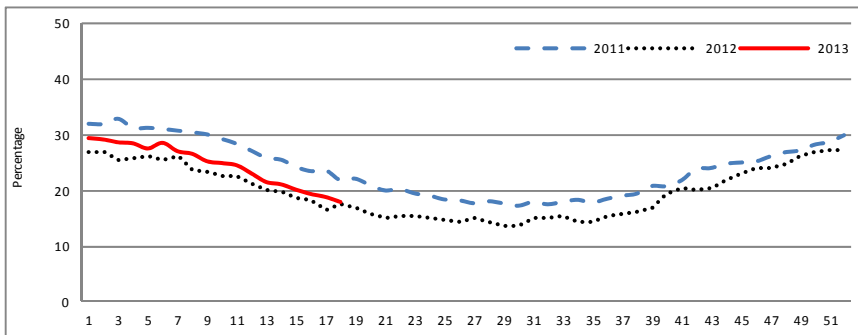
#### Priority diseases under surveillance in DEWS

- 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 18, 2013 (29 Dec 2012 to 4 May 2013)

Disease	# of Cases	Percentage
ARI	3,643,016	25%
Bloody diarrhoea	40,067	<0.5%
Acute diarrhoea	1,043,404	7%
S. Malaria	679,455	5%
Skin Diseases	552,426	4%
Unexplained fever	481,496	3%
<b>Total (All consultations)</b>	<b>14,708,431</b>	

Figure-2: Weekly trend of Acute Respiratory Infection (ARI) in Pakistan; Week-1, 2011 to week-18, 2013.



Major health events reported during the Epi-week - 18 (28 Apr - 4 May 2013)

Disease	# of Cases	Percentage
ARI	116,191	18%
Bloody diarrhoea	1,787	<0.5%
Acute diarrhoea	56,455	9%
S. Malaria	27,065	6%
Skin Diseases	23,810	4%
Unexplained fever	19,348	3%
<b>Total (All consultations)</b>	<b>643,119</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.

## Outbreaks (Wk-18/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
4-May	Leishmaniasis	Balochistan	Killa Sai-fullah	THQ Muslim Bagh, Town Area	0	0	0	0	Alert for 31 more Cutaneous Leishmaniasis cases were reported from THQ Muslim Bagh in week 18, 2013. Regular treatment were providing at Leishmaniasis centre. There had multiple lesions on the different parts of body. All information shared regularly with DHO.
29-Apr	Measles	Balochistan	Gwadar	Gahttidoor UC Surbandar, Tehsil Gwadar	1	0	0	1	Alert for 2 suspected Measles cases. Total 22 cases have been reported from the same place, so far. Vit-A and symptomatic treatment were provided to all the suspected cases. During active search no more Measles cases were found. during house to house survey 20 children were found fully vaccinated against Measles. Information shared with DoH.
29-Apr	Measles	Punjab	Lahore	Ravi Town UC 7, UC 1, UC 10, UC12, UC 29, UC 13	18	5	19	5	Alert for 30 suspected cases were reported from different Teaching Hospitals in Lahore. All the suspected cases has been given 1st dose of Vitamin-A and second dose ensured after 24 hours. During active surveillance 17 more suspected cases were found in different union councils. A total of 100 children were checked for routine EPI coverage where 23 children were found to have missed second dose of Measles. 2 blood samples and Throat swabs were taken and sent to NIH. Health education in the community was conducted with the help of LHW, religious and community Leaders. Information shared with EDO(H) and Director EPI.
29-Apr	Measles	Punjab	Lahore	Shalimar Town , UC 15 , UC 16 UC 22, UC 23, UC 25, UC 35 UC 36,	13	7	8	4	Alert for 25 suspected cases were reported from different Teaching Hospitals in Lahore. All the suspected cases has been given 1st dose of vitamin-A while vaccinator and LHW were requested to ensure 2nd dose on next day. during active surveillance 7 more suspected cases were found in different union councils. A total of 100 children were checked for routine EPI coverage where 32 children were found to have missed second dose of Measles. 1 blood sample and Throat swab was taken and sent to NIH. Health education conducted in the community with the help of LHW, religious and community Leaders. Information shared with EDO(H) and Director EPI.
2-May	Measles	Sindh	Karachi	Mehmoodabad Channesar Goth, Jamshed Town	5	1	0	0	Alert for suspected case of Measles at Channesar Goth, Jamshed Town, Karachi. During active surveillance in the area 1 death due to Measles and 4 more suspected Measles cases were found. None of the child was found vaccinated for Measles. 1 blood sample collected and sent to NIH. Vitamin-A doses given to all the suspected cases. Health education provided to the family. Vaccination status of 41 children were taken. BCG=38 (93%), Penta-1=36(90%), Penta-2=32(80%), Penta-3=32(80%), Measles-1=25(68%), Measles-2=15(45%). Information shared with THMT.
2-May	Measles	Sindh	Mirpur Khas	Village Muhammad Hassan Mari, UC Khann, taluka Hussain Buksh Mari	0	5	0	1	Alert for suspected case of Measles was reported from Civil hospital Mirpurkhas. During active surveillance 5 more cases were found. 4 Blood samples were collected and send to NIH. Two doses of Vitamin (A) were given to both the suspected cases. Health education session imparted regarding importance of vaccination. Information shared with DHO.
3-May	Measles	Sindh	Hyderabad	Noor Muhammad Chang Village, taluka Hyderabad	1	1	0	4	Alert for suspected Measles cases was reported from village Noor Muhammad Chaang. During active surveillance 6 cases were found. Four cases were found vaccinated. 4 blood samples were taken and sent to NIH. Vitamin-A doses given to all the suspected cases. Health education session conducting in the community regarding importance of vaccination. Information shared with DHO office.

Figure-3: Number of alerts received and responded, week 15 - 18, 2013

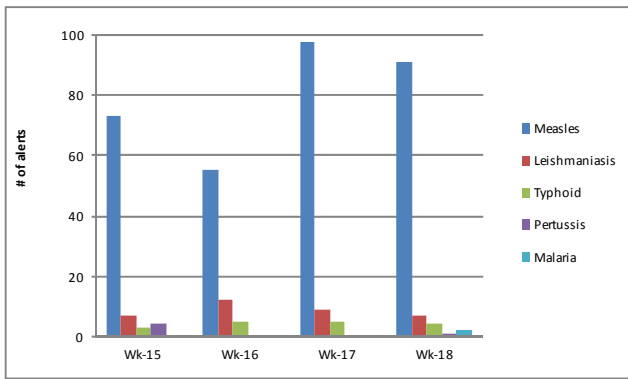
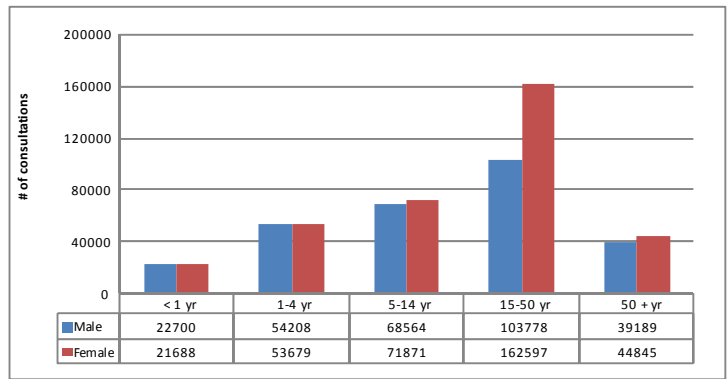


Figure-4: Number of consultations by age and gender, week 17, 2013



**Province Khyber Pakhtunkhwa:**

190 health facilities from 6 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 53,242 patients consultations reported in week 18, 2013. 23 alerts, 21 were for Measles, while 1 each for AWD and Scabies were received and appropriate measures were taken. ARI trend showing increase as compared with last week.

Figure-5: Trend of ARI, province Khyber Pakhtunkhwa

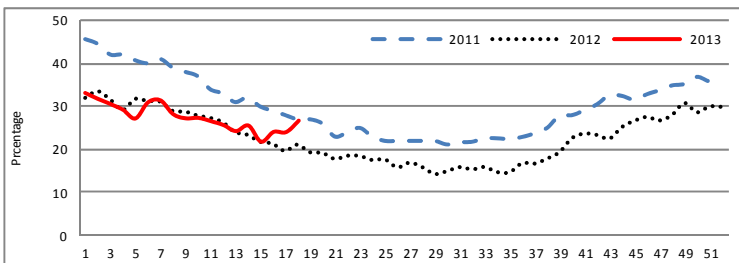
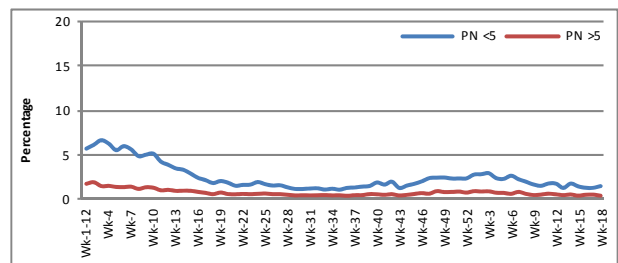


Figure-6: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**Province Sindh:**

833 health facilities from 23 districts in Sindh province reported to DEWS with a total of 250,468 patient consultations in week 18, 2013. 25 alerts were received and appropriate measures were taken. Altogether 24 alerts were for Measles; while 1 for Leishmaniasis. ARI trend showing increase as compared with last week.

Figure-7: Trend of ARI, province Sindh

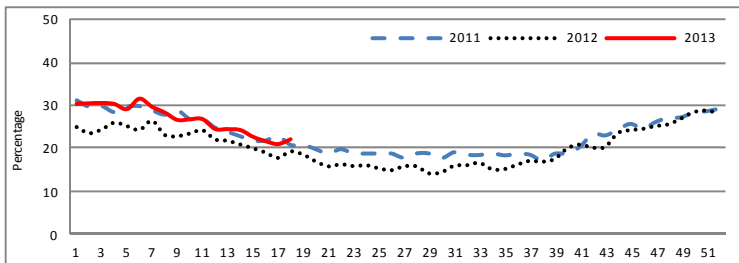
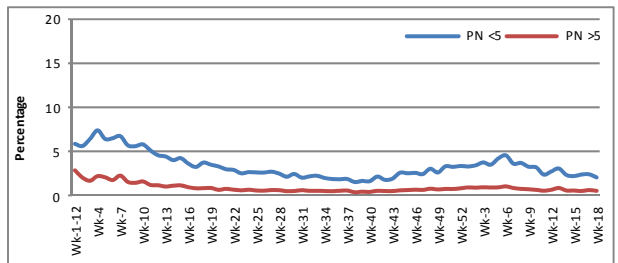


Figure-8: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**Province Punjab:**

490 health facilities from 9 districts in province Punjab reported to DEWS with a total of 279,518 patients consultations in week 18, 2013. Total 39 alerts were received and appropriate measures were taken. Altogether 34 alerts were for Measles; 2 for Typhoid; while 1 each for Acute diarrhoea, ARI and Dengue fever. ARI trend showing decrease as compared with last week.

Figure-9: Trend of ARI, province Punjab

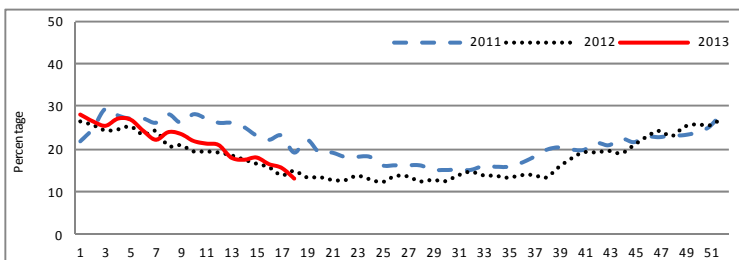
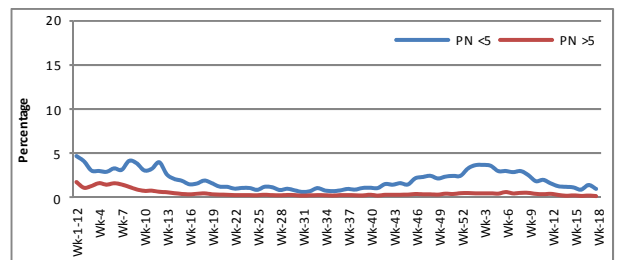


Figure-10: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**Province Balochistan:**

254 health facilities from 14 districts in province Balochistan reported to DEWS with a total of 30,101 patients consultations in week 18, 2013. Total 10 alerts reported and appropriate measures were taken in week 18, 2013. Altogether 3 alerts for Leishmaniasis; 2 each for Malaria, Measles and Typhoid; while 1 for Pertussis. ARI trend showing increase as compared with last week.

Figure-11: Trend of ARI, province Balochistan

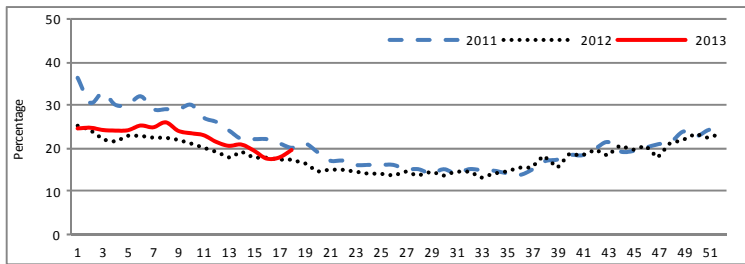
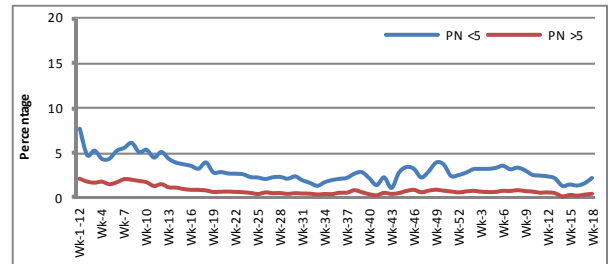


Figure-12: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**Province Gilgit Baltistan:**

14 health facilities from 4 districts in Gilgit Baltistan reported to DEWS with a total of 1,837 patients consultations in week 18, 2013. No alerts for any disease was reported in last 9 weeks (Wk 10 to 18), 2012. ARI showing a decrease as compared with last week.

Figure-13: Trend of ARI, province Gilgit Baltistan

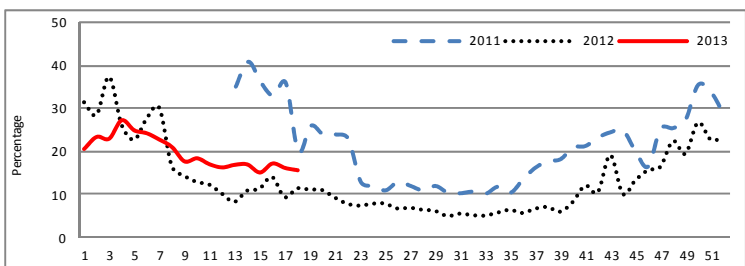
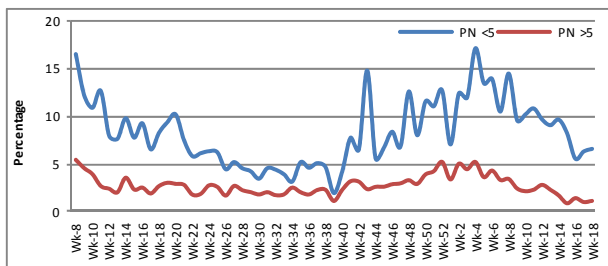


Figure-14: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**FATA:**

16 health facilities from 1 agency in FATA reported to DEWS with a total of 3,842 patients consultations in week 18, 2013. 3 alerts, 2 for Leishmaniasis, while 1 for Measles were reported in week 18, 2013 and appropriate measures were taken. ARI showing decrease as compared with last week.

Figure-15: Trend of ARI, FATA

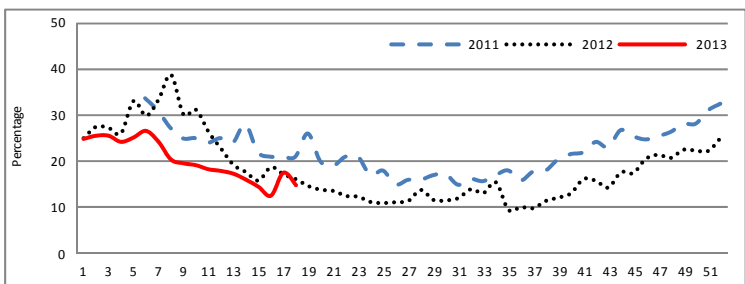
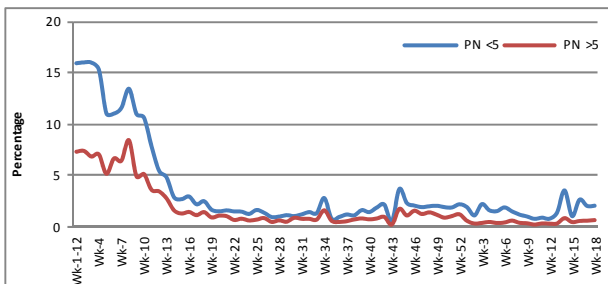


Figure-16: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013



**State of Azad Jammu and Kashmir:**

101 health facilities from 8 districts in AJ&K reported to DEWS with a total of 19,686 patients consultations in week 18, 2013. 8 alerts were reported in week 17, 2013. Altogether 7 alerts were for Measles; while 1 for Leishmaniasis. ARI trend showing decrease as compared with last week.

Figure-17: Trend of ARI, AJ&K

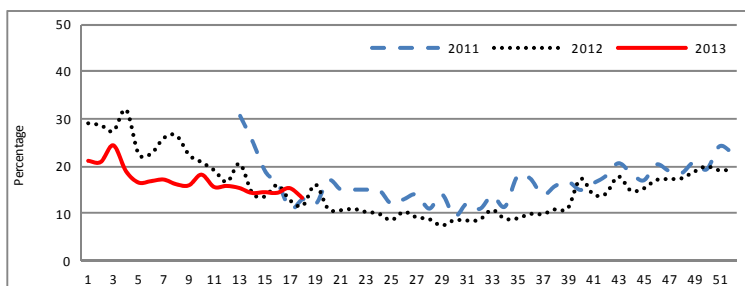


Figure-18: Weekly trend of Pneumonia <5 and >5 years, week 1, 2012 to 18, 2013

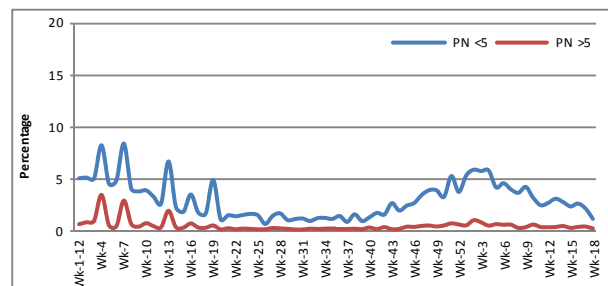
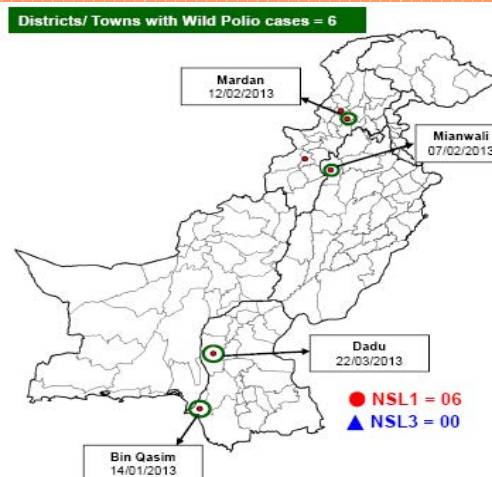


Table-1: Number of alerts and outbreaks reported and investigated with appropriate response

Disease	2012		Current week 18, 2013		2013 (Total up till week - 18)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	1	0	13	2
Acute jaundice syndrome	113	22	0	0	9	3
Bloody diarrhoea	146	11	0	0	11	1
CCHF	68	41	0	0	7	3
Dengue fever	175	29	1	0	2	0
Diphtheria	60	16	0	0	14	1
Measles	5922	812	53	0	1743	216
Pertussis	366	147	1	0	23	4
NNT + tetanus	560	0	0	0	107	0
Malaria	136	68	2	0	8	2
Leishmaniasis	900	78	6	0	302	37
Others	1529	58	7	0	169	3
<b>Total</b>	<b>10610</b>	<b>1453</b>	<b>71</b>	<b>0</b>	<b>2408</b>	<b>272</b>

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

- In week 18, 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).

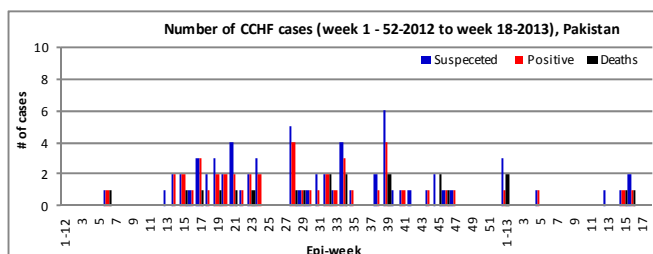


Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	1	-	-
Sindh	4	-	-	2	-	-
Khyber Pakhtunkhwa	27	-	-	3	-	-
FATA	17	2	1	-	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
<b>Total</b>	<b>55</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>-</b>	<b>-</b>

**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. 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 18, 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 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 18 (4 May 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 18)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	130	7	266	1
Balochistan	447	119	1816	31	272	47	1119	45
FATA	211	31	559	13	55	12	174	3
Gilgit Baltistan	40	1	54	0	11	0	22	0
ICT	27	2	63	0	30	2	103	1
Khyber Pakhtunkhwa	1989	108	3542	38	499	67	1204	19
Punjab	809	40	1329	16	635	57	4406	41
Sindh	2234	505	7353	212	111	24	3152	142
Total	5922	812	14984	310	1743	216	10446	252

Alerts and outbreaks, week 18, 2013

