

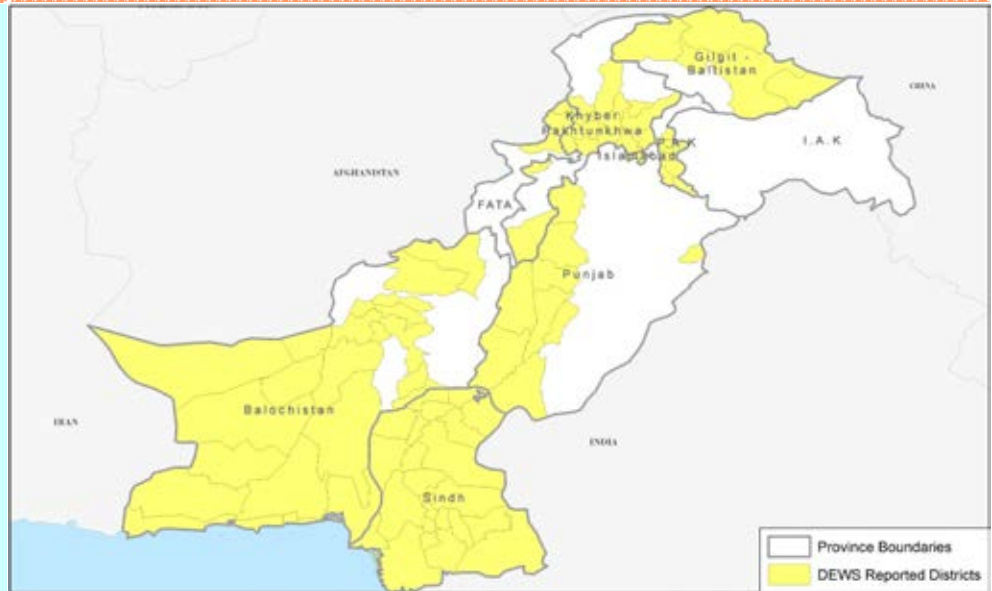


Highlights

*Epidemiological week no. 27
(30 June to 6 July 2013)*

- **Measles:** This week a total of 79 alerts investigated. 381 measles cases were reported from 25 districts. Vitamin-A drops provided to the suspected cases and district health teams were contacted to improve outreach vaccination in affected areas.
- **76 districts** and 2039 health facilities have reported to Disease Early Warning system (DEWS) this week 27, compared to 76 districts with 2081 health facilities shared weekly data in week 26, 2013 to the DEWS.
- Total **774,036** patients consultations reported this week compared to **871,230** consultations in week 26, 2013.
- Altogether **126** alerts were investigated and **7** outbreaks were identified and timely responded.

Figure-1: 76 districts reported to DEWS in week 27, 2013



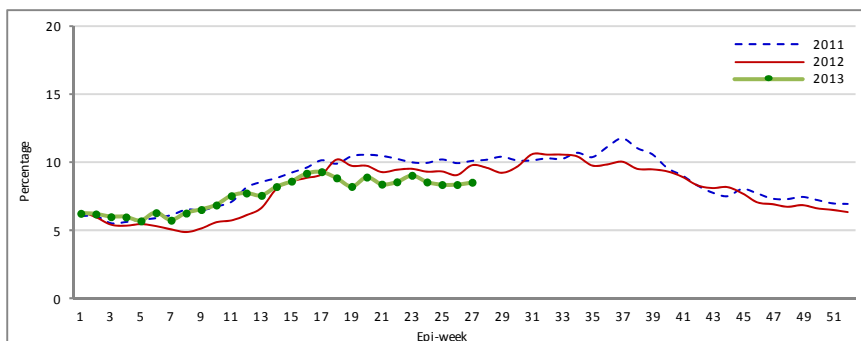
Priority diseases under surveillance in DEWS

- Pneumonia
- Acute Watery Diarrhoea
- Bloody diarrhoea
- 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 27, 2013 (29 Dec 2012 to 6 July 2013)

Disease	# of Cases	Percentage
ARI	4,715,673	21%
Bloody diarrhoea	58,941	<0.5%
Acute diarrhoea	1,669,433	8%
S. Malaria	957,217	4%
Skin Diseases	816,914	4%
Unexplained fever	683,846	3%
Total (All consultations)	21,986,058	

Figure-2: Weekly trend of Acute Diarrhoea in Pakistan; Week-1, 2011 to week-27, 2013.



Major health events reported during the Epi-week - 27 (30 June - 6 July 2013)

Disease	# of Cases	Percentage
ARI	107,537	14%
Bloody diarrhoea	2,089	<0.5%
Acute diarrhoea	66,344	9%
S. Malaria	28,919	4%
Skin Diseases	29,297	4%
Unexplained fever	19,148	2%
Total (All consultations)	774,036	

- The graph (Figure-2) shows the comparison of weekly trend of Acute diarrhoea (AD) as proportional morbidity (percentage of cases out of total consultations) reported to DEWS each week in year 2011; 2012 and 2013.

Outbreaks (Wk-27/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
3-Jul	AJS	AJK	Poonch	Village Sadaat Mohalla Chotagala, UC Dhamni	0	3	0	5	Alert for AJS reported from village Sadaat, Mohalla Chotagala. During field investigation a total of 8 suspected cases of AJS were found. 3 blood samples were taken and sent to NIH. Water sampling from both the sources using H2S kits was done and found contaminated. Health and hygiene session conducted in the community. IEC material were distributed in the community. Follow up planned.
2-Jul	Measles	Khyber Pakhtunkhwa	Battagram	Kishawra	3	1	1	0	5 suspected measles case have been reported from DHQ Battagram. All the cases belong to Kishawra. During investigation no new suspected Measles cases were found. Vitamin-A drops were given to all the suspected cases. Information shared with EPI team and requested to start outreach vaccination in the area.
4-Jul	Measles	Khyber Pakhtunkhwa	Battagram	Battagram town area	2	0	2	1	5 suspected measles case have been reported from DHQ Battagram. All the cases belong to in surrounding of Battagram Town. During investigation no more Measles cases were found. Vitamin-A drops were given to all the suspected cases. Information shared with EPI team and requested to start outreach vaccination in the area.
6-Jul	Measles	Khyber Pakhtunkhwa	Battagram	Gijbori	4	0	1	0	5 suspected measles cases were reported from Gijbori. During field investigation no new suspected Measles cases were found. Vitamin-A drops were given to all the suspected cases. Information shared with EPI team and requested to start outreach vaccination in the area.
2-Jul	AWD	Sindh	Jamshoro	Village Moosa Chhoro UC Mole Taluka Thano Bula Khan	7	37	9	68	An alert for AWD case reported from Village Moosa Chhoro, Taluka Thano Bula Khan. During field investigation, a total of 121 cases of AWD were found in which 23 were severely dehydrated. Standard AWD case management was reinforced. 2 swabs were taken and sent to NIH for laboratory testing, while 8 water samples were taken from different parts of the area and found contaminated. Open well is the source of water for drinking. Aqua tabs, Jerry cans and soaps were distributed in the village, health and hygiene sessions were conducted in the village. All the information was shared with district health authorities and requested for chlorination of wells.
3-Jul	AWD	Sindh	Thatta	Village Ali Muhammad jat, Deh Madna, Uc Gharo, Talkuka gorabari, District Thatta	1	5	8	6	An outbreak of AWD was reported from DHQ, Thatta. During field investigation a total of 20 AWD cases were found. Water pond and Hand pump were the source of water for drinking. Over all health and hygiene condition of the area found poor. Health education session imparted. Aqua tabs and ORS were distributed among the villagers. Information shared with DHO office 9 water samples were collected and sent to lab, stool samples were not taken as all the patients had antibiotics and been treated at hospital and all were on recovery phase.
5-Jul	AWD	Sindh	Umer Kot	Village Vehro Sharif, UC Umerkot-2	0	6	0	3	Alert for 9 AWD cases in Village Vehro Sharif. 3 cases were moderately and 6 cases were found mild dehydrated. Standard AWD case management was reinforced. Natives were using water from hand pumps for drinking. 2 stool samples and 3 water samples were collected. Aqua tabs, ORS, PURE Sachets and soaps were distributed in the village. Health education session imparted health and hygiene. Information shared with DHO.

Figure-3: Number of alerts received and responded, week 24 - 27, 2013

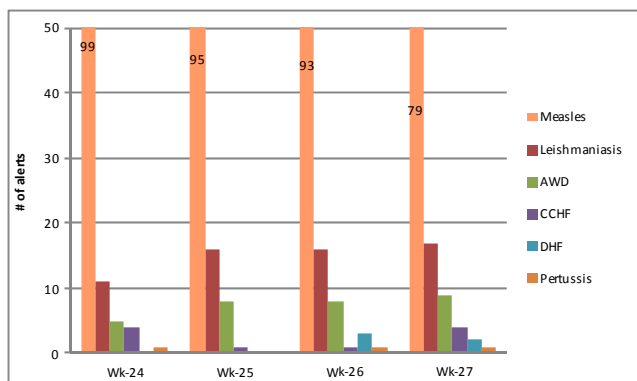
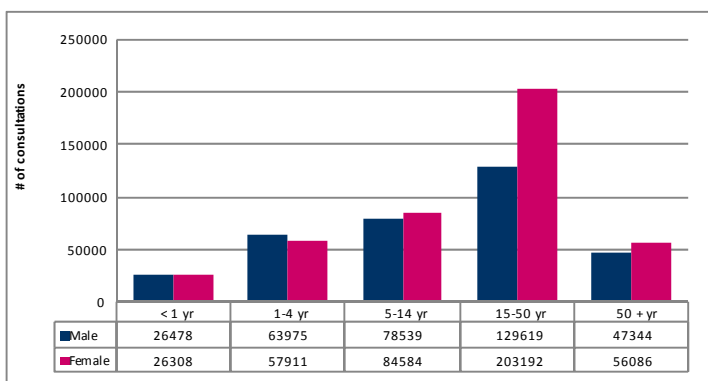
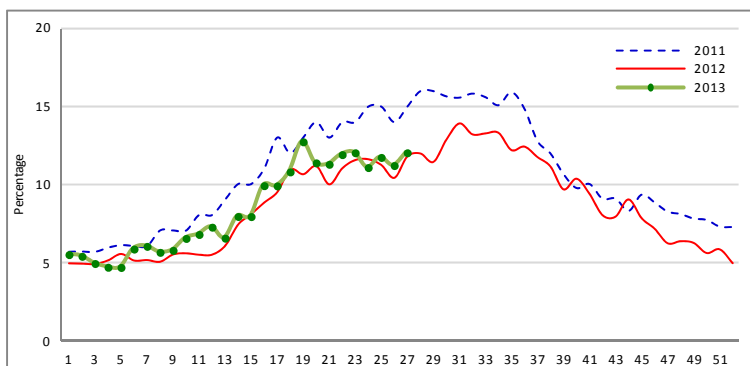


Figure-4: Number of consultations by age and gender, week 27, 2013



Province Khyber Pakhtunkhwa:

Figure-5: Weekly trend of Acute diarrhoea, province Khyber Pakhtunkhwa



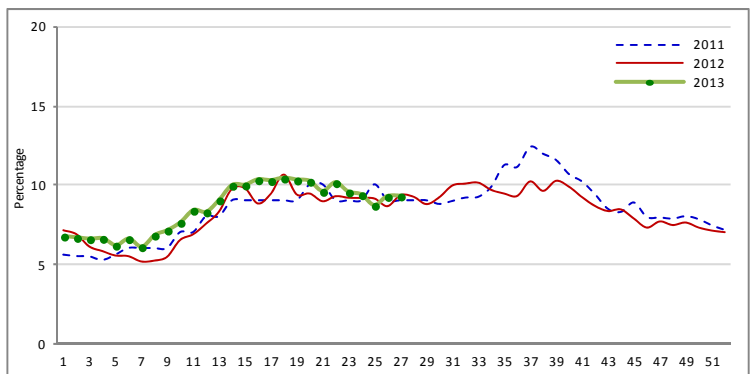
236 health facilities from 14 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 88,198 patients consultations reported in week 27, 2013.

45 alerts were received and appropriate measures were taken. Altogether 44 alerts were for Measles; while 1 for Leishmaniasis.

The weekly trend of Acute diarrhoea is showing a slight increase (natural fluctuation) as compare with last two weeks in KP.

Province Sindh:

Figure-6: Weekly trend of Acute diarrhoea, province Sindh

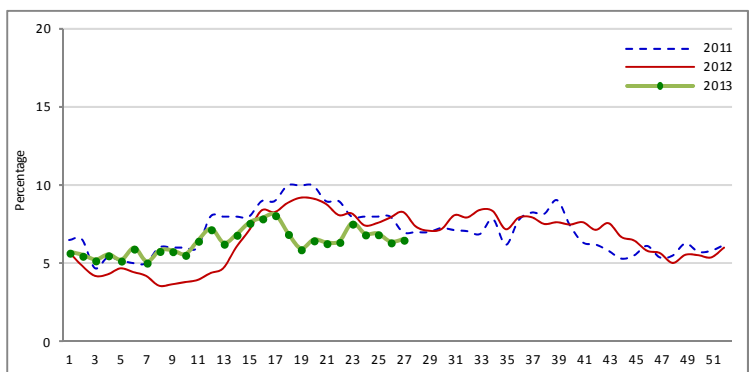


813 health facilities from 23 districts in Sindh province reported to DEWS with a total of 286,367 patient consultations in week 27, 2013. 8 alerts, 3 each for AWD and Measles; while 1 each for DF and NNT were received and appropriate measures were taken.

The overall proportion of AD for the province is high as compared to the previous years during the same period. During this season 11 AWD outbreaks identified and responded, the situation need continuous attention in the province. ARI trend showing decrease as compared with last few weeks.

Province Punjab:

Figure-7: Trend of ARI, province Punjab



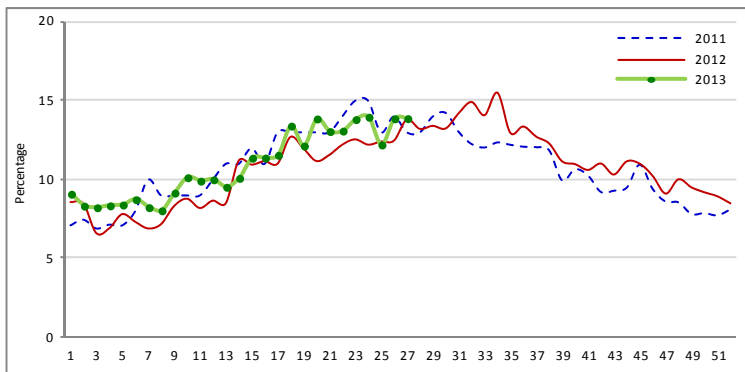
614 health facilities from 12 districts in province Punjab reported to DEWS with a total of 340,012 patients consultations in week 27, 2013. Total 45 alerts were received and appropriate measures were taken.

Altogether 27 alerts were for Measles; 6 for AWD; 4 for Acute diarrhoea; 2 each for Bloody diarrhoea, Scabies and Typhoid; while 1 each for acute jaundice syndrome and NNT.

The weekly trend of AD in Punjab showing slight increase this week as compared with previous week.

Province Balochistan:

Figure-8: Weekly trend of Acute diarrhoea, province Balochistan



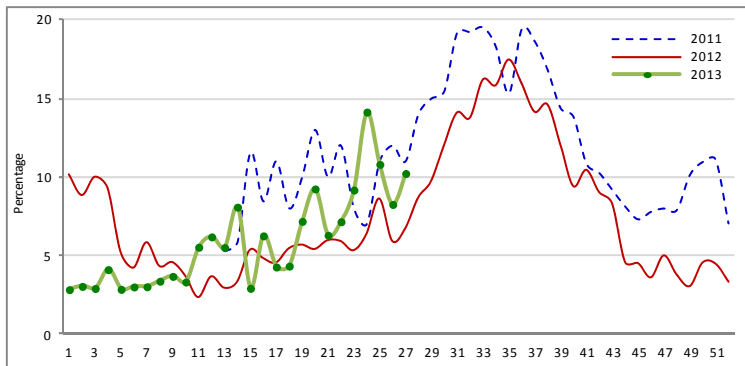
252 health facilities from 12 districts in province Balochistan reported to DEWS with a total of 34,144 patients consultations in week 27, 2013. Total 13 alerts reported and appropriate measures were taken in week 27, 2013.

Altogether 7 alerts were for Leishmaniasis; 4 for CCHF; while 1 each for Dengue fever and Pertussis.

In this week the weekly proportion of AD has increased as compared with last week. Vigilant monitoring of the situation is required.

Province Gilgit Baltistan:

Figure-9: Weekly trend of Acute diarrhoea, province Gilgit Baltistan



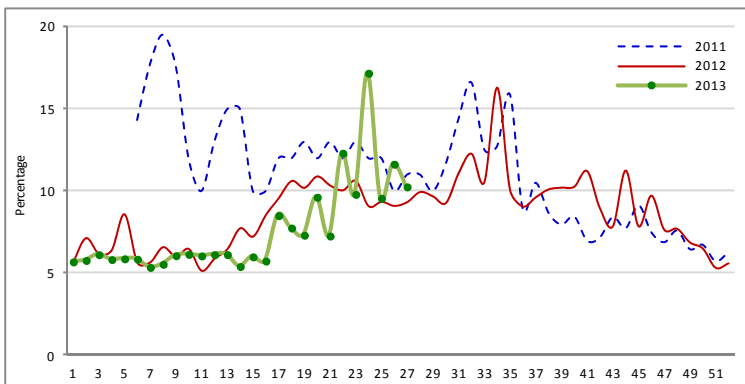
3 health facilities from 3 districts in Gilgit Baltistan reported to DEWS with a total of 420 patients consultations in week 27, 2013.

No alerts for any disease was reported in week 27, 2013.

The weekly AD trend is fluctuating and upward and required vigilant monitoring.

FATA:

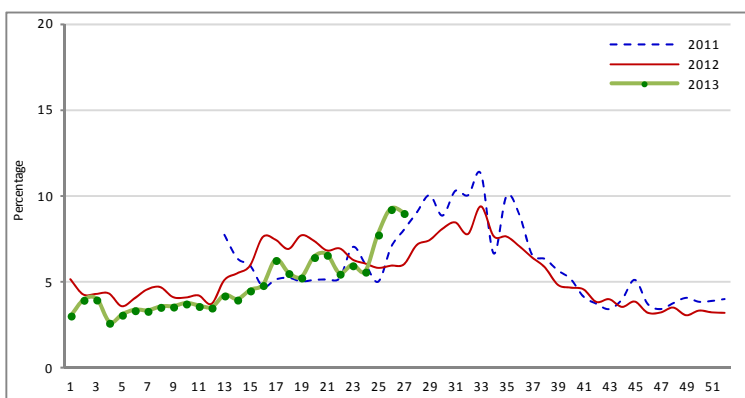
Figure-10: Weekly trend of Acute diarrhoea, FATA



37 health facilities from 3 agencies in FATA reported to DEWS with a total of 8,391 patients consultations in week 27, 2013. 7 alerts, 6 for Leishmaniasis; while 1 for Measles were reported in week 27, 2013 and appropriate measures were taken.

Fluctuating and upward weekly trend of Acute diarrhoea is noted in FATA and require vigilant monitoring.

Figure-11: Weekly trend of Acute diarrhoea, AJ&K



State of Azad Jammu and Kashmir:

74 health facilities from 8 districts in AJ&K reported to DEWS with a total of 13,667 patients consultations in week 27, 2013.

8 alerts; 4 were for Measles; 3 for Leishmaniasis; while 1 for Pertussis were received in week 27, 2013 and appropriate measures were taken.

Weekly trend of AD remained steady this week after a sharp increase during the previous 2 weeks. Vigilant monitoring of the situation is required.

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

Disease	2012		Current week 27, 2013		2013 (Total up till week - 27)	
	A	O	A	O	A	O
Acute watery diarrhoea	635	171	9	3	59	14
Acute jaundice syndrome	113	22	2	1	17	5
Bloody diarrhoea	146	11	2	0	22	1
CCHF	68	41	4	0	33	15
Dengue fever	175	29	2	0	9	1
Diphtheria	60	16	0	0	22	1
Measles	5922	812	79	3	2543	249
Pertussis	366	147	1	0	32	8
NNT + tetanus	560	0	2	0	131	0
Malaria	136	68	0	0	14	2
Cutaneous Leishmaniasis	900	78	17	0	414	43
Others	1529	58	8	0	232	3
Total	10610	1453	126	7	3528	342

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

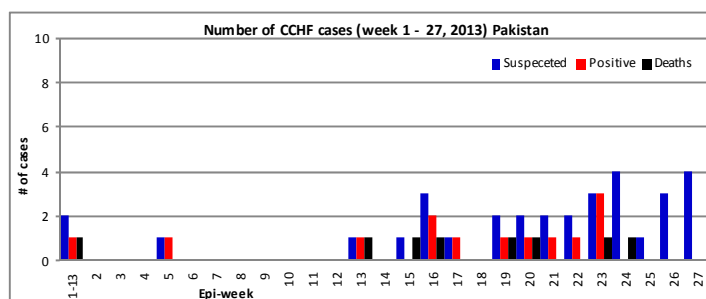
- In week 27, 2013, no new wild polio case was reported in the country. The total number of polio cases remains 18 in 2013 (compared to 25 during the same time period last year) from 10 districts/towns/tribal agencies /areas (compared to 13 during the same time period last year).



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	2	-	-
Sindh	4	-	-	2	-	-
Khyber Pakhtunkhwa	27	-	-	4	-	-
FATA	17	2	1	10	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	18	-	-

Follow up of CCHF

In week 26 and 27 (23 Jun - 6 July), 2013, 7 new suspected CCHF case reported, 4 from district Quetta; 1 from Sibi; 1 from Killa Abdullah in province Balochistan; while 1 case reported from Afghanistan admitted in Fatima Jinnah Chest Hospital, Quetta. 6 out of 7 suspected CCHF cases were admitted in Fatimah Jinnah Chest hospital, Quetta; while 1 cases belongs to district Sibi is admitted in Sandeman hospital, Quetta. All the laboratory results were awaiting. All the suspected cases having history of animal contact. Total 32 suspected, 13 confirmed CCHF cases and 8 deaths have been reported in year 2013.



In 2012, a total of 62 suspected cases have been reported throughout the country with 41 cases confirmed to date and in total 18 deaths; of which 13 deaths (CFR is 31.7%) are reported of the lab confirmed cases and 5 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.

Number of CCHF cases reported in year 2012 and 2013 up till June.

Province	District	2012			2013		
		Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
Balochistan	Quetta	38	23	7	26	8	5
ICT	Islamabad	-	-	-	2	2	-
KPK	D I Khan	3	3	1	-	-	-
	Haripur	2	-	2	-	-	-
	Peshawar	4	3	2	1	1	-
Punjab	D G Khan	-	-	-	1	-	1
	Multan	6	3	2	1	1	1
	Rawalpindi	2	2	1	-	-	-
Sindh	Karachi	7	7	3	1	1	1
Total		62	41	18	32	13	8

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).

Measles**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 27 (6 July 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 27)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	205	11	398	1
Balochistan	447	119	1816	31	293	54	1168	47
FATA	211	31	559	13	66	12	188	4
Gilgit Baltistan	40	1	54	0	11	1	22	0
ICT	27	2	63	0	43	2	142	1
Khyber Pakhtunkhwa	1989	108	3542	38	869	73	1743	20
Punjab	809	40	1329	16	942	68	7762	90
Sindh	2234	505	7353	212	114	28	3363	147
Total	5922	812	14984	310	2543	249	14786	310

Acute Watery Diarrhoea/Cholera

Acute Watery diarrhoea/Cholera is an acute enteric infection caused by the ingestion of bacterium *Vibrio cholera* present in faecally contaminated water or food. Primarily linked to insufficient access to safe water and proper sanitation, its impact can be even more dramatic in areas where basic environmental infrastructures are disrupted or have been destroyed. Countries facing complex emergencies are particularly vulnerable to cholera outbreaks. Massive displacement of IDPs or refugees to overcrowded settings, where the provision of potable water and sanitation is challenging, constitutes also a risk factor. Every year, there are an estimated 3–5 million cholera cases and 100,000–120,000 deaths due to cholera worldwide.

Acute Watery Diarrhoea/Cholera is characterized in its most severe form by a sudden onset of acute watery diarrhea that can lead to death by severe dehydration. The extremely short incubation period - two hours to five days - enhances the potentially explosive pattern of outbreaks, as the number of cases can rise very quickly. About 75% of people infected with cholera do not develop any symptoms. However, the pathogens stay in their feces for 7 to 14 days and are shed back into the environment, possibly infecting other individuals. Cholera is an extremely virulent disease that affects both children

Key messages:

Cholera is transmitted through contaminated water or food. Prevention and preparedness of cholera require a coordinated multidisciplinary approach
Cholera can rapidly lead to severe dehydration and death if left untreated
Once *Vibrio cholera* is confirmed, the WHO clinical case definition is sufficient to diagnosis and management of cases. Laboratory testing is required only for antimicrobial sensitivity testing and for confirming the end of an outbreak.
Provision of safe water, proper sanitation, and food safety are critical for preventing occurrence of cholera
Health education aims at communities adopting preventive behavior for averting contamination
ORS can successfully treat 80% of cholera cases
Appropriate antibiotics can reduce the duration of *Vibrio Cholera* bacterium in the patient stool

