



Highlights

Epidemiological week no. 29
(14 to 20 July 2013)

- **Measles:** This week a total of 95 alerts investigated. 279 measles cases were reported from 31 districts. Vitamin-A drops provided to the suspected cases and district health teams were contacted to improve outreach vaccination in affected areas.
- **79 districts** and 2216 health facilities have reported to Disease Early Warning system (DEWS) this week 29, compared to 81 districts with 2154 health facilities shared weekly data in week 28, 2013 to the DEWS.
- Total **838,540** patients consultations reported this week compared to **865,578** consultations in week 28, 2013.
- Altogether **133** alerts were investigated and **4** outbreaks were identified and timely responded.

Figure-1: 79 districts reported to DEWS in week 29, 2013



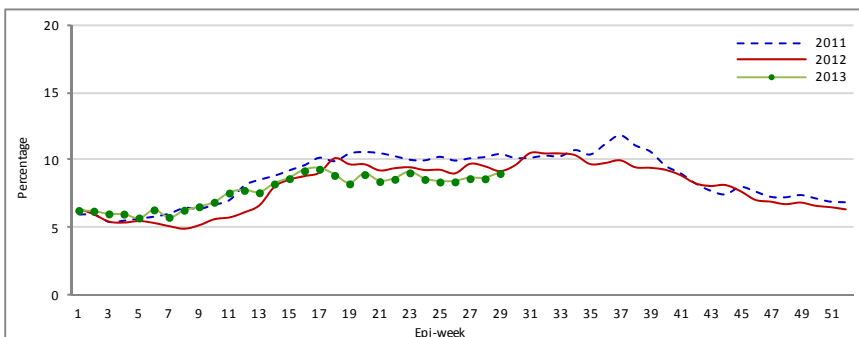
Priority diseases under surveillance in DEWS

- 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 29, 2013 (29 Dec 2012 to 20 July 2013)

Disease	# of Cases	Percentage
ARI	4,961,642	21%
Bloody diarrhoea	63,203	<0.5%
Acute diarrhoea	1,823,098	8%
S. Malaria	1,024,364	4%
Skin Diseases	894,909	4%
Unexplained fever	732,727	3%
Total (All consultations)	23,722,708	

Figure-2: Weekly trend of Acute Diarrhoea in Pakistan; Week-1, 2011 to week-29, 2013.



Major health events reported during the Epi-week - 29 (14 - 20 July 2013)

Disease	# of Cases	Percentage
ARI	119,244	14%
Bloody diarrhoea	2,120	<0.5%
Acute diarrhoea	75,432	9%
S. Malaria	34,582	4%
Skin Diseases	39,450	5%
Unexplained fever	23,228	3%
Total (All consultations)	838,540	

- 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-29/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
17-Jul	AD	AJK	Sudhnoti	Village Muslimabad UC Patan Sher Khan Tehsil mang	4	19	1	26	Alert of increase in number of acute diarrhoea cases from FAP Muslimabad. During field investigation along with DoH team, a total of 50 cases were investigated. 1 Rectal Swab was taken and sent to NIH for laboratory testing. Water sampling from both the sources using H2S kits was done and found contaminated. Health and hygiene sessions were conducted in the community. IEC material were distributed in the community. Follow up planned.
15-Jul	Measles	Balochistan	Kalat	Village Purdozai, UC Mehmood Goharam, Tehsil Mangochar	4	1	1	0	6 suspected Measles cases were investigated in the community. Cases were presenting with cough and fever along with rashes. Vit-A drops given to all the suspected cases. Health education session conducted. EPI team vaccinated 12 children for Measles in the area and surroundings. Information shared with DHO.
15-Jul	Measles	Balochistan	Kalat	Village Yousofzai, UC Mehmood Goharam, Tehsil Mangochar	2	3	4	3	6 suspected Measles cases were reported. During field investigation, 6 more suspected Measles cases were identified. Vit-A doses given to all the suspected cases. Health and hygiene education session conducted in the community. EPI team vaccinated 17 children for Measles. Information shared with DHO.
15-Jul	Measles	Khyber Pakhtunkhwa	Mardan	Village Saduddin, UC Pat Baba, Tehsil Takht Bhai, Mardan	0	1	3	2	Alert for suspected Measles reported from DHQ Hospital Mardan. The male patient 15 years of age was found partially vaccinated for routine immunization but unimmunized for measles vaccination (Verbal History). Vitamin-A drops was given to all the suspected cases. During active surveillance in the area and surroundings, 5 more suspected cases of Measles were identified in same family and neighbors. All children of 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, LHW's working in the area were involved. Information shared with EDO-H, Focal person and EPI coordinator.
15-Jul	AD	Punjab	DG Khan	Sokar	4	17	3	11	Alert for Acute diarrhoea received from BHU Sokar, district DG Khan. A total of 36 cases were treated in OPD. During investigation it is revealed that all the cases belongs to different localities. Assessment of the health facility regarding availability of medicines was done. ORS and Aqua tabs were provided. Standard Acute diarrhoea cases definition was reinforced. Health and hygiene education session conducted for the patients and families. LHW's mobilized to conduct health education sessions in community. Aqua tabs, jerry cans, soap and life straws were distributed.

Figure-3: Number of alerts received and responded, week 26 - 29, 2013

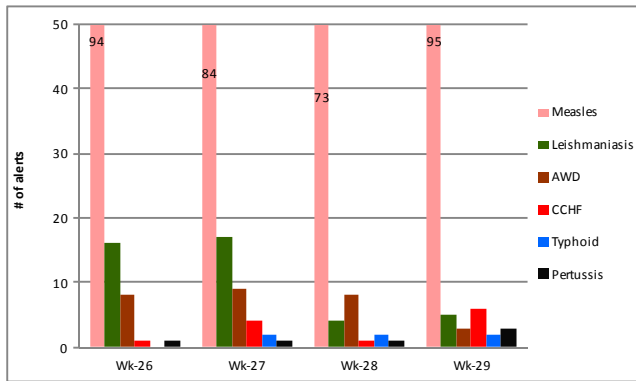
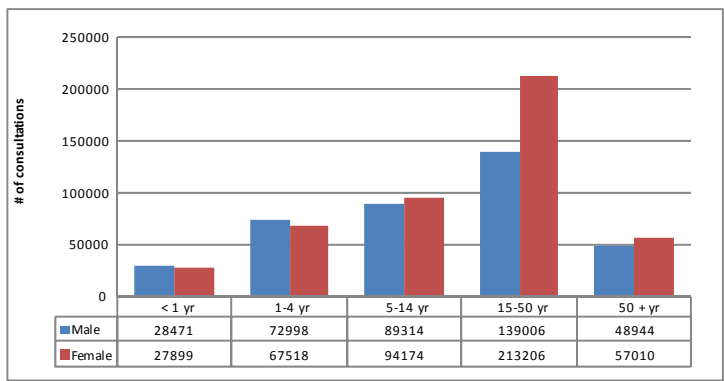
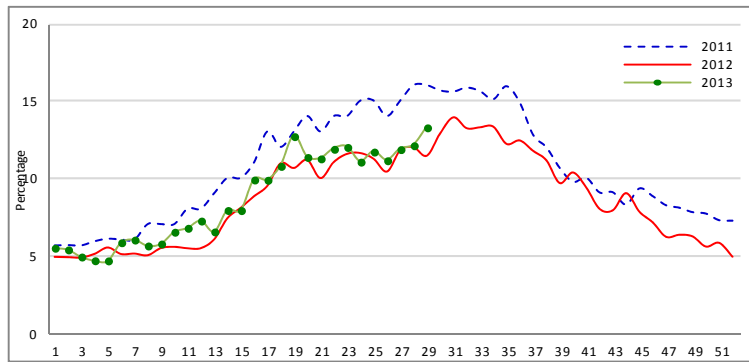


Figure-4: Number of consultations by age and gender, week 29, 2013



Province Khyber Pakhtunkhwa:

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



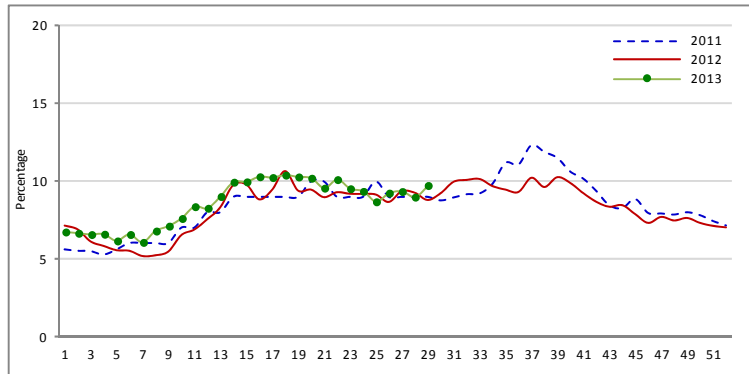
296 health facilities from 14 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 87,467 patients consultations reported in week 29, 2013.

59 alerts were received and appropriate measures were taken. Altogether 58 alerts were for Measles, while 1 for Leishmaniasis.

The weekly trend of Acute diarrhoea is showing increase as compare with last three weeks in KP. Required vigilant monitoring of the situation.

Province Sindh:

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

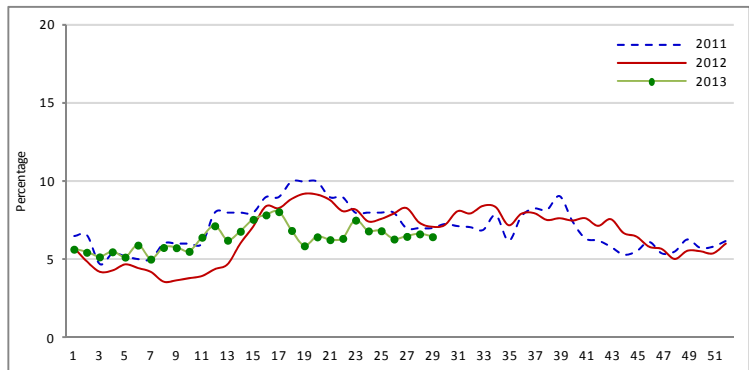


841 health facilities from 23 districts in Sindh province reported to DEWS with a total of 356,236 patient consultations in week 29, 2013. A total of 9 alerts were received and appropriate measures were taken. Altogether 4 alert were for NNT; 2 for Dengue fever; while 1 each for CCHF, Leishmaniasis and Pertussis.

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.

Province Punjab:

Figure-7: Trend of ARI, province Punjab



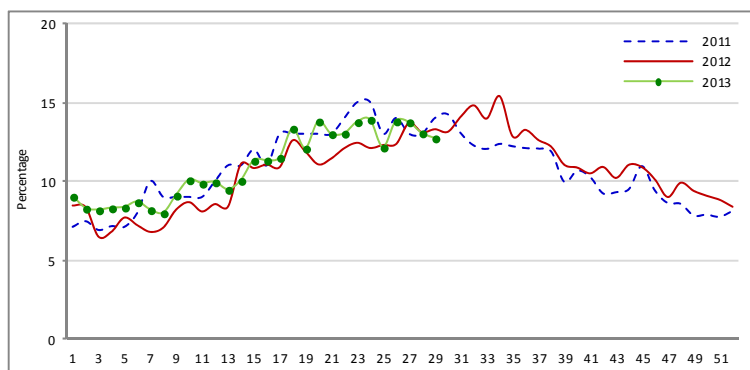
658 health facilities from 13 districts in province Punjab reported to DEWS with a total of 332,481 patients consultations in week 29, 2013. Total 36 alerts were received and appropriate measures were taken.

Altogether 22 alerts were for Measles; 4 for NNT; 2 each for AJS, AWD and Typhoid; while 1 each for Acute diarrhoea, Bloody diarrhoea, Diphtheria and Scabies.

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

Province Balochistan:

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



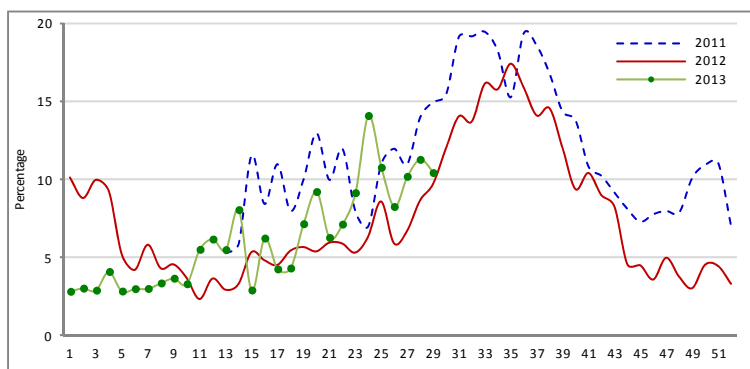
293 health facilities from 15 districts in province Balochistan reported to DEWS with a total of 37,602 patients consultations in week 29, 2013. Total 22 alerts were reported and appropriate measures were taken in week 29, 2013.

Altogether 11 alerts were for Measles; 5 for CCHF; 2 for Pertussis; while 1 each for AWD, Leishmaniasis, NNT and tetanus.

In this week the weekly proportion of AD showing minor decrease as compared with last week but vigilant monitoring of the situation is required.

Province Gilgit Baltistan:

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



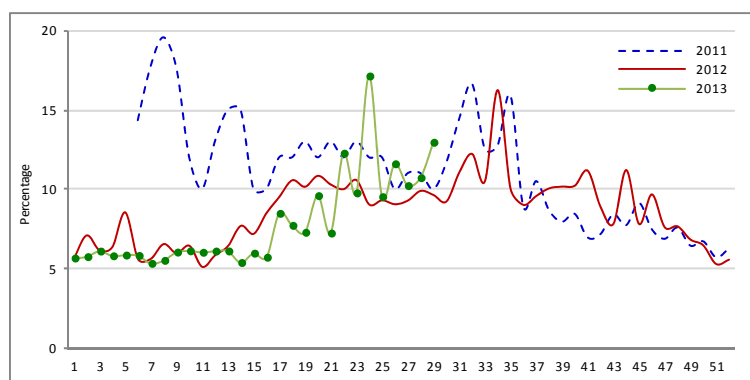
6 health facilities from 3 districts in Gilgit Baltistan reported to DEWS with a total of 630 patients consultations in week 29, 2013.

No alerts for any disease was reported in week 29, 2013.

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

FATA:

Figure-10: Weekly trend of Acute diarrhoea, FATA

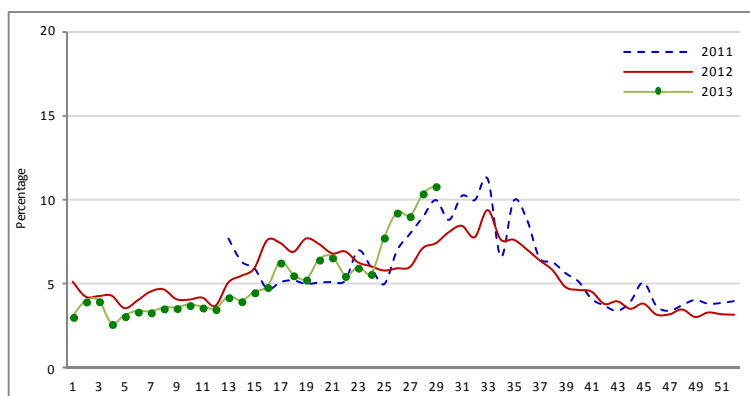


36 health facilities from 3 agencies in FATA reported to DEWS with a total of 7,858 patients consultations in week 29, 2013. No alert for any disease was reported in week 29, 2013.

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

State of Azad Jammu and Kashmir:

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



77 health facilities from 8 districts in AJ&K reported to DEWS with a total of 12,823 patients consultations in week 29, 2013.

7 alerts were received in week 29, 2013 and appropriate measures were taken. Altogether 4 alerts were for Measles; 2 for Leishmaniasis; while 1 for Acute diarrhoea.

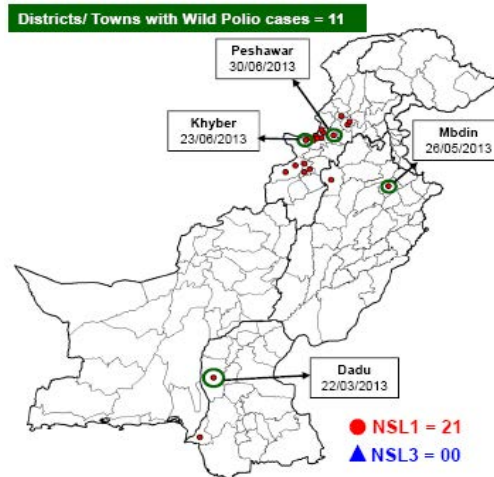
Weekly trend of AD showing increase this week. Vigilant monitoring of the situation is required.

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

Disease	2012		Current week 29, 2013		2013 (Total up till week - 29)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	3	0	70	15
Acute jaundice syndrome	113	22	2	0	19	5
Bloody diarrhoea	146	11	1	0	23	1
CCHF	68	41	6	0	40	19
Dengue fever	175	29	2	0	11	1
Diphtheria	60	16	1	0	25	1
Measles	5922	812	95	4	2717	260
Pertussis	366	147	3	0	36	9
NNT + tetanus	560	0	10	0	145	0
Malaria	136	68	0	0	14	2
Cutaneous Leishmaniasis	900	78	5	0	423	43
Others	1529	58	5	0	246	3
Total	10631	1475	133	4	3769	359

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

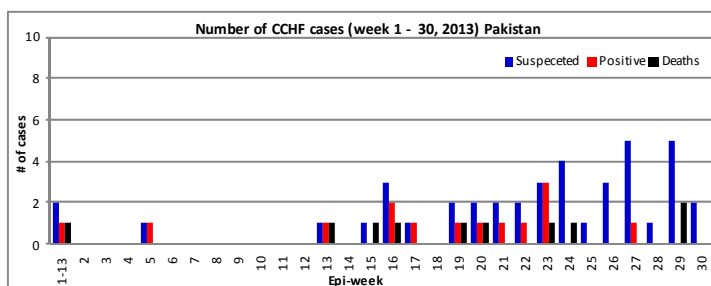
- In week 28, 2013, no new wild polio case was reported in the country; the total number of polio cases remains 21 in 2013 (compared to 29 during the same time period last year) from 11 districts/towns/tribal agencies /areas (compared to 16 during the same time period last year).



Province	2012			2013		
	P1	P3	P1+P3	P1	P3	P1+P3
Punjab	2	-	-	2	-	-
Sindh	4	-	-	2	-	-
Khyber Pakhtunkhwa	27	-	-	5	-	-
FATA	17	2	1	12	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	21	-	-

Follow up of CCHF

In last 2 weeks (week 29 and ongoing week 30), 2013, 7 suspected and 1 positive CCHF cases were reported. 6 suspected cases including 2 deaths were from province Balochistan 2 each from districts Quetta and Pishin; while 1 suspected case belongs to Afghanistan (admitted in hospital in Quetta). All the cases having history of contacts with animals at home and their products (Boucher by profession). All the laboratory results were awaiting. Total 42 suspected, 14 confirmed CCHF cases and 10 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 15 July.							
Province	District	2012			2013		
		Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
Balochistan	Quetta	38	23	7	33	8	7
	Pishin	-	-	-	2	-	-
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	2	2	1
Total		62	41	18	42	14	10

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 29 (20 July 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 29)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	213	11	407	1
Balochistan	447	119	1816	31	311	56	1212	48
FATA	211	31	559	13	66	12	188	4
Gilgit Baltistan	40	1	54	0	11	1	22	0
ICT	27	2	63	0	44	2	146	1
Khyber Pakhtunkhwa	1989	108	3542	38	969	79	1924	20
Punjab	809	40	1329	16	989	71	8108	92
Sindh	2234	505	7353	212	114	28	3380	148
Total	5922	812	14984	310	2717	260	15387	314

Acute Watery Diarrhoea/Cholera

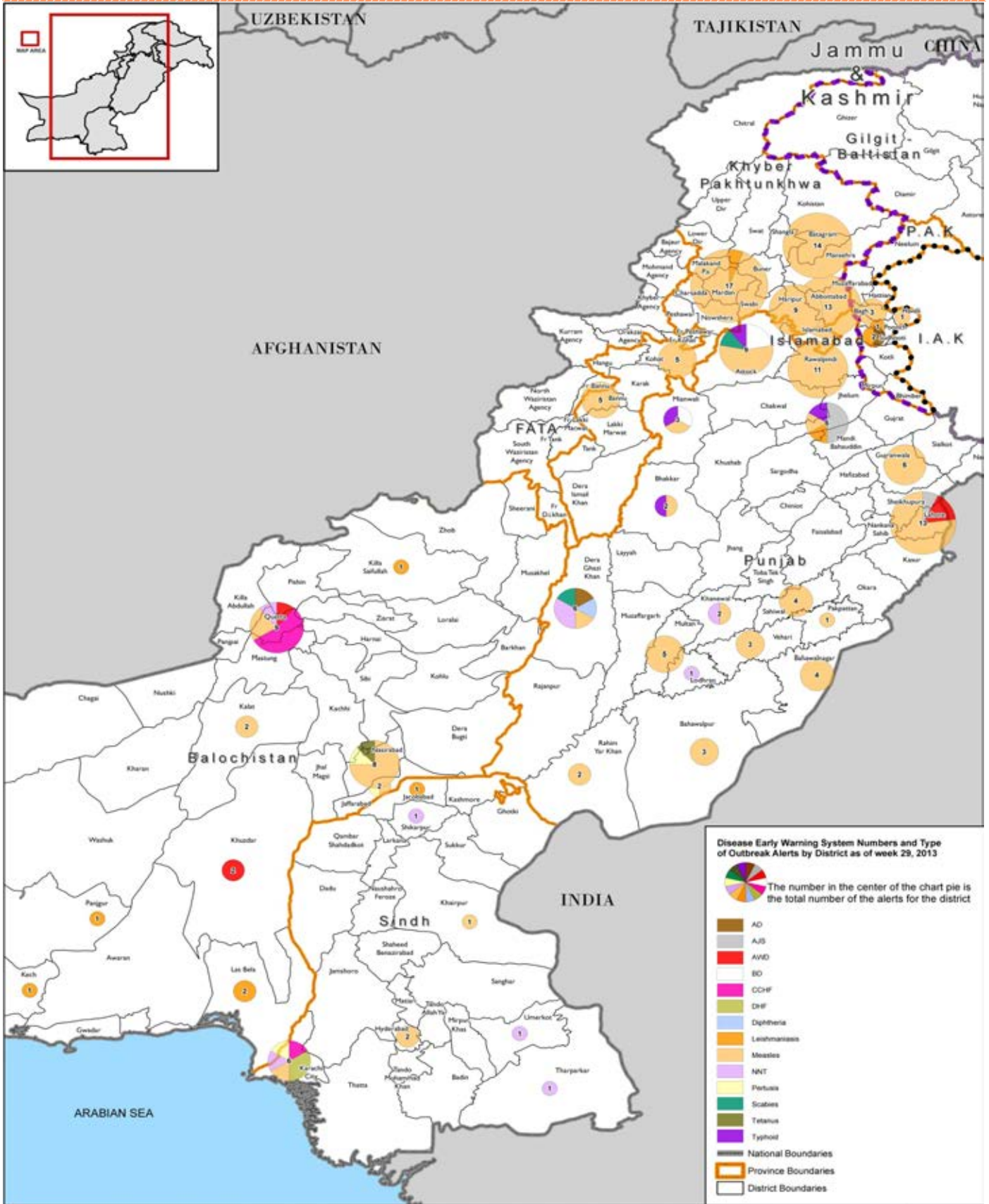
Acute Watery diarrhoea/Cholera is an acute enteric infection caused by the ingestion of bacterium *Vibrio cholera* present in faecally contaminated water or food. Primarily linked to insufficient access to safe water and proper sanitation, its impact can be even more dramatic in areas where basic environmental 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 and adults. Individuals with lower immunity, such as malnourished children are at greater risk of death if infected by cholera.

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.

Alerts and outbreaks, week 29, 2013



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 Projection: WGS84
 Data source: WHO (DEWS)
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