



Highlights

Figure-1: 72 districts reported to DEWS in week 31, 2013

Epidemiological week no. 31 (28 July to 3 Aug 2013)

- **CCHF:** In week 31, 2013, 3 suspected CCHF cases were reported from districts Pishin, Kalat and Killa Abdullah in Balochistan. All the cases having history of contact with animals and fresh animal products (meat, skin). Epidemiological investigation conducted and treatment initiated (Page 5).
- **Measles:** This week a total of 45 alerts investigated. 94 measles cases were reported from 22 districts. Vitamin-A drops provided to the suspected cases and district health teams were contacted to improve outreach vaccination in affected areas (Page 6).
- **72 districts and 1974 health facilities** have reported to Disease Early Warning system (DEWS) this week 31, compared to 78 districts with 2174 health facilities shared weekly data in week 30, 2013 to the DEWS.
- **Total 703,222 patients consultations** reported this week compared to **873,483 consultations** in week 30, 2013.
- **Altogether 81 alerts** were investigated and **2 outbreaks** were identified and timely responded.



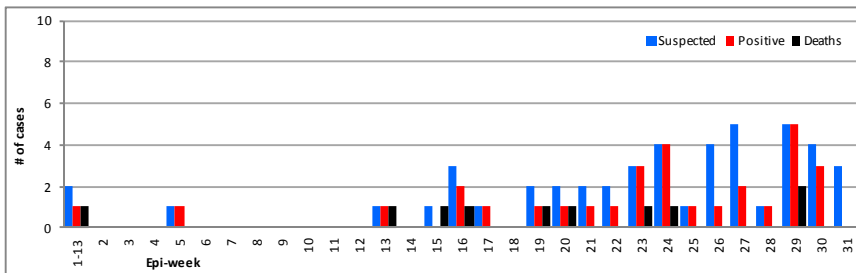
Priority diseases under surveillance in DEWS

- 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 30, 2013 (29 Dec 2012 to 3 August 2013)

Disease	# of Cases	Percentage
ARI	5,182,226	20%
Bloody diarrhoea	67,514	<0.5%
Acute diarrhoea	1,964,038	8%
S. Malaria	1,083,498	4%
Skin Diseases	966,122	4%
Unexplained fever	780,077	3%
Total (All consultations)	25,355,690	

Figure-2: Weekly number of CCHF cases and deaths in Pakistan; Week-1-31, 2013.



Major health events reported during the Epi-week - 31 (28 July - 3 August 2013)

Disease	# of Cases	Percentage
ARI	96,963	14%
Bloody diarrhoea	1,809	<0.5%
Acute diarrhoea	62,097	9%
S. Malaria	26,194	4%
Skin Diseases	31,391	5%
Unexplained fever	21,174	3%
Total (All consultations)	703,222	

Suspected and confirmed CCHF cases are reported continuously. Since the epidemiological week 13, 2013, at least one confirmed case per week has been reported. The highest number of case (5) reported in week 29 and 4 confirmed cases in week 24. So far total 47 suspected cases, 30 confirmed cases and 10 deaths have been reported and most of the cases are from Balochistan (suspected 40, confirmed 24, deaths 7). WHO team is supporting the provincial health departments in handling the situation. The WHO - DEWS team conducts epidemiological investigation and contacts tracing (active surveillance in the community and hospitals); sharing information with the stakeholders (DoH, Livestock Dept. and other partners); Give health education to family members and close contacts of the cases on preventive measures and seeking immediate health care in case of fever; Collect and transport blood samples to NIH for laboratory confirmation.

A coordination mechanism is being developed involving DoH, Livestock Dept., UNHCR, Relief Intl., PPHI and the Fatimah Jinnah Hospital to handle the situation effectively. Formation/activation of the CCHF response committee in the Province. Personal Protective Equipment (PPE), gloves, and masks for infection control at the isolation wards in the hospital, and medicine provided for case management. Although joint efforts are being taken however more vigorous actions are required on the eradication of infected ticks in the high risks areas and awareness raising in the population.

Outbreaks (Wk-31/2013):

Date	Disease	Province	District	Area	<5M	>5M	<5F	>5F	Action Taken
29-Jul	Pertussis	Balochistan	Khuzdar	BHU Hazargangi (Village Garu, Dhat UC Hazargangi Tehsil Nall)	0	0	0	0	24 cases of probable Pertussis were reported from BHU Hazargangi. The cases were initially investigate and managed by PPHI at BHU level. Immunization status was found unsatisfactory. EPI provincial office was contacted and response has been planned.
2-Aug	BD	Sindh	Tharparkar	Kumbhar Paro, Kanjhi colony, Mithi Town, UC Mithi	3	0	3	0	6 suspected cases of Bloody diarrhea were reported from Maleer Child Clinic, Mithi. Open Dug well was the source of water for drinking. Reinforced standard case management. 3 stool samples were collected and sent to laboratory testing. Aqua tabs and Antiseptic soaps were distributed in the community. Health education session conducted in the community regarding hygiene and use of boiled and fresh water. Information shared with DoH office.
24-Jul	Measles	AJK	Poonch	Village Nakarcherran na tara, UC Ali sojal	0	2	0	3	Alert for 3 suspected measles cases were reported from RHC Ali Sojal. 1 blood sample taken and sent to NIH. During field investigation 2 more suspected Measles cases were found. Vit-A doses given to active cases and contacts. Information shared with DoH and outreach vaccination arranged and a total of 45 children <5yrs were vaccinated.
22-Jul	AWD	Khyber Pakhtunkhwa	Mardan	Village Zara Shero, UC Katlang Khass, Tehsil Katlang	0	1	0	0	AWD alert reported from ER Unit of DHQ Hospital Mardan, after investigation from suspected case at hospital, Epidemiological and Environmental assessment was carried out in the area. No more AWD case found in the community. Stool Sample was taken and sent to NIH which was found positive for Cholera. Health and hygiene sessions were conducted for affected family and in community. LHW's were requested for start door to door awareness sessions on hygienic practices. Aqua tabs, soaps, hygiene kits and ORS distributed in the community. EDO health informed about the situation.
24-Jul	Measles	Punjab	Bhakkar	UC Khansar, Tehsil Bhakkar	0	1	0	0	1 Suspected case of measles reported from UC Khansar from DHQ Bhakkar while 4 cases were reported from same UC in past 3 weeks making a total of 5 cases in past one month. All the suspected cases were reported from different locations in UC Khansar. All the suspected cases were given single doze of Vitamin-A, while second doze ensured after 24 hours. Community was provided awareness through health education session for highlighting importance of vaccination of children against all the EPI diseases. Information shared with EDO(H).
24-Jul	AWD	Sindh	Shikarpur	Village Habib kot, UC Ruk, Tehsil lakhi	4	5	8	8	7 AWD cases were reported from BHU Habib Kot UC Ruk, district Shikarpur with severe dehydration. During field investigation 18 more AWD cases were found in the area. 1 Stool sample collected and 10 water sample were collected for laboratory testing. Health education imparted, Aqua tabs, Zinc tabs, ORS and IEC materials distributed in the community. Information shared with DHMT.

Figure-3: Number of alerts received and responded, week 28 - 31, 2013

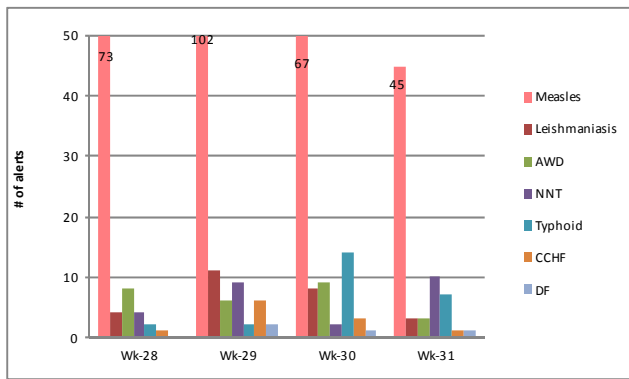
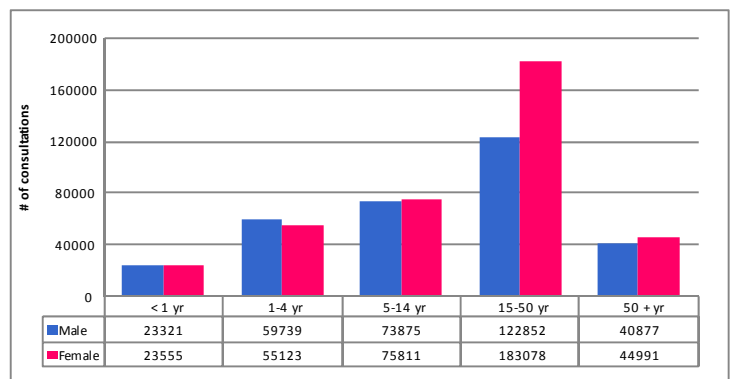
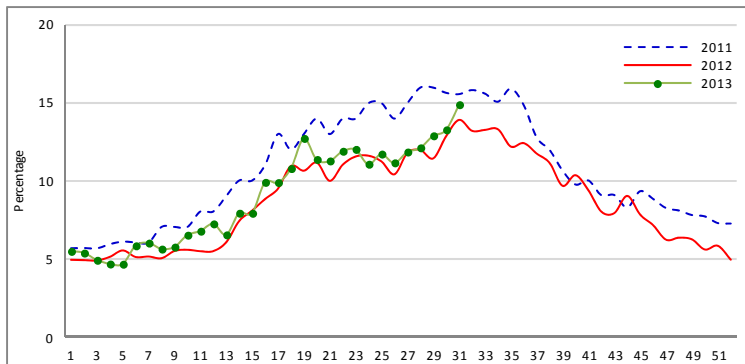


Figure-4: Number of consultations by age and gender, week 31, 2013



Province Khyber Pakhtunkhwa:

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



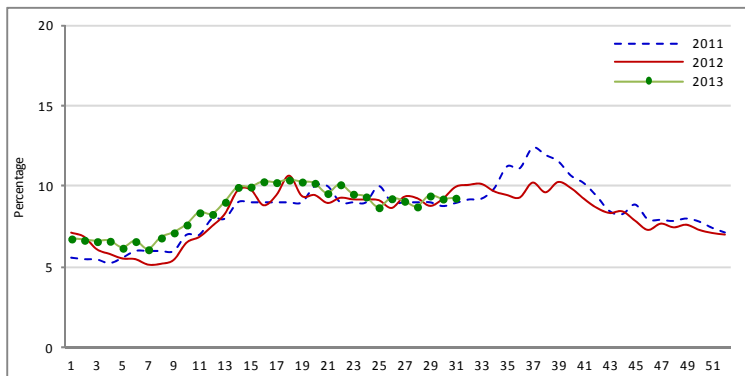
228 health facilities from 11 districts of Khyber Pakhtunkhwa sent reports to DEWS with a total of 69,178 patients consultations reported in week 31, 2013.

22 alerts were received and appropriate measures were taken. Altogether 21 alerts were for Measles, while 1 for AWD.

The weekly trend of Acute diarrhoea is showing significantly increase from last few weeks in KP. Required vigilant monitoring of the situation. One Cholera confirmed case reported from KP.

Province Sindh:

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

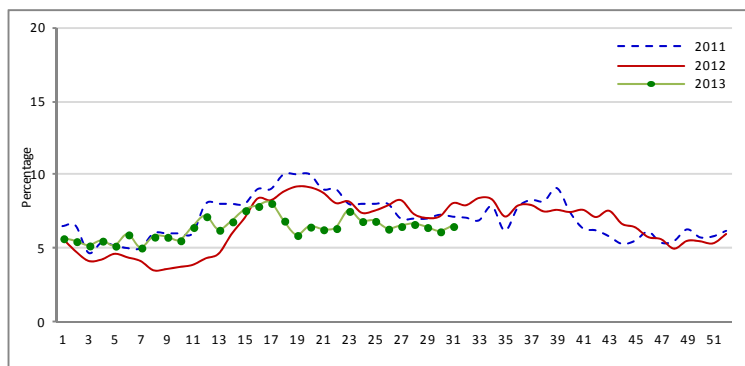


763 health facilities from 23 districts in Sindh province reported to DEWS with a total of 252,593 patient consultations in week 31, 2013. A total of 12 alerts were received and appropriate measures were taken. Altogether 6 alerts were for NNT; 3 for Leishmaniasis; 2 for AWD; while 1 for Bloody diarrhoea.

The overall proportion of AD for the province is high as compared to the previous years during the same period. During this season 14 AWD outbreaks identified and responded, the situation need continuous attention in the province.

Province Punjab:

Figure-7: Trend of ARI, province Punjab



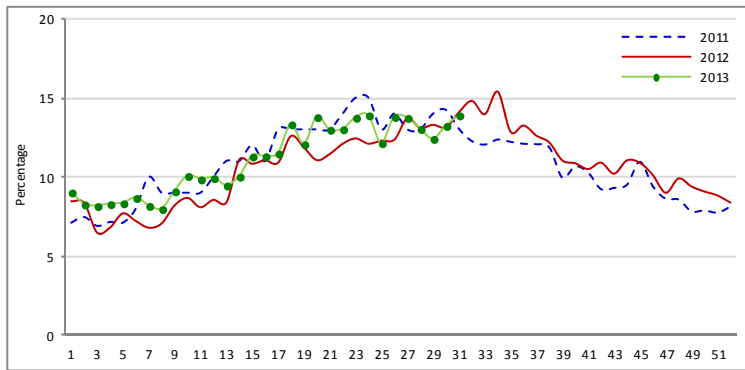
615 health facilities from 12 districts in province Punjab reported to DEWS with a total of 328,635 patients consultations in week 31, 2013. Total 30 alerts were received and appropriate measures were taken.

Altogether 14 alerts were for Measles; 6 for Typhoid; 4 for Scabies; 3 for Acute diarrhoea; while 1 each for AJS, Dengue fever and Diphtheria.

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

Province Balochistan:

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



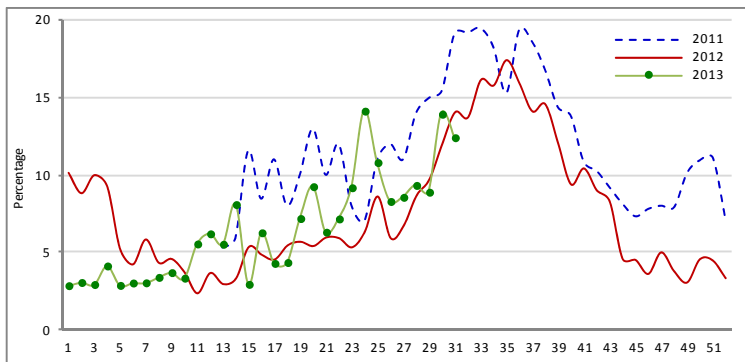
238 health facilities from 11 districts in province Balochistan reported to DEWS with a total of 30,215 patients consultations in week 31, 2013. Total 7 alerts were reported and appropriate measures were taken in week 31, 2013.

Altogether 2 alerts each were for Measles and NNT; while 1 each for CCHF; Pertussis and Typhoid.

In this week the weekly proportion of AD showing increase as compared with last week and vigilant monitoring of the situation is required.

Province Gilgit Baltistan:

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



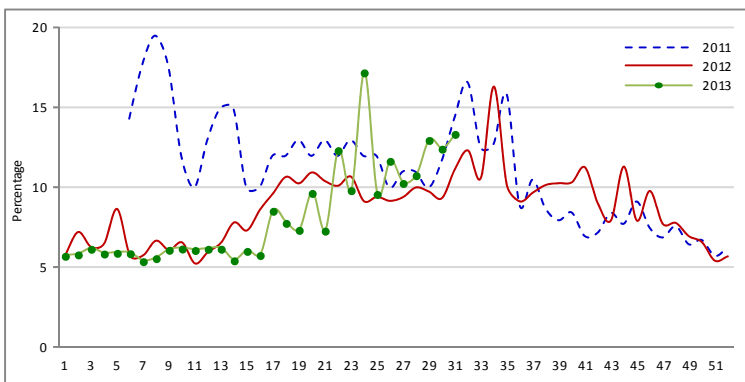
3 health facilities from 3 districts in Gilgit Baltistan reported to DEWS with a total of 177 patients consultations in week 31, 2013.

No alerts for any disease was reported in week 30, 2013.

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

FATA:

Figure-10: Weekly trend of Acute diarrhoea, FATA

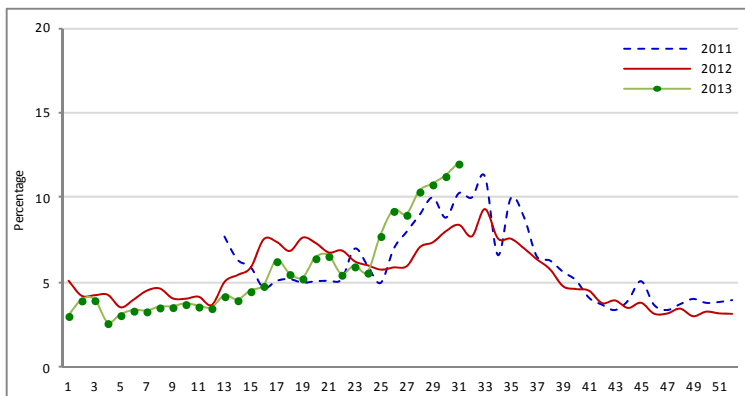


45 health facilities from 3 agencies in FATA reported to DEWS with a total of 10,801 patients consultations in week 31, 2013. 4 alerts, 2 each were for Measles and NNT reported in week 31 and appropriate measures were taken in week 31, 2013.

Fluctuating and high 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



73 health facilities from 8 districts in AJ&K reported to DEWS with a total of 9,156 patients consultations in week 31, 2013.

5 alerts for Measles were received in week 31, 2013 and appropriate measures were taken.

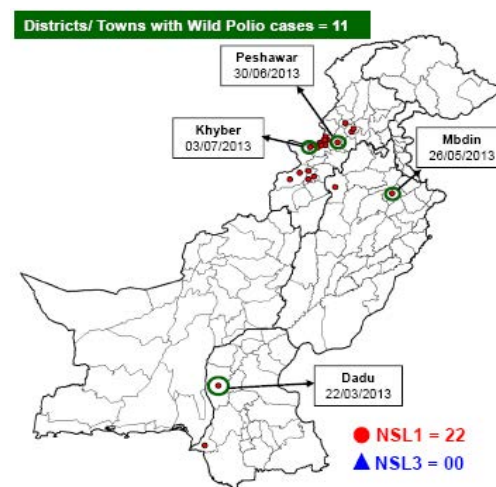
Weekly trend of Acute diarrhoea showing significantly increase from last couple of weeks. Vigilant monitoring of the situation is required.

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

Disease	2012		Current week 31, 2013		2013 (Total up till week - 31)	
	A	O	A	O	A	O
Acute watery diarrhoea	656	193	3	0	85	19
Acute jaundice syndrome	113	22	1	0	28	5
Bloody diarrhoea	146	11	1	1	26	2
CCHF	68	41	1	0	44	24
Dengue fever	175	29	1	0	13	1
Diphtheria	60	16	1	0	27	1
Measles	5922	812	45	0	2836	267
Pertussis	366	147	1	1	37	10
NNT + tetanus	560	0	10	0	157	0
Malaria	136	68	0	0	14	2
Cutaneous Leishmaniasis	900	78	3	0	440	44
Others	1529	58	14	0	281	3
Total	10631	1475	81	2	3988	378

Distribution of Wild Polio Virus cases Pakistan 2012 and 2013

- In week 31, 2013, no new wild polio case was reported in the country. The total number of polio cases remains 22 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	13	-	-
Balochistan	4	-	-	-	-	-
AJ&K	-	-	-	-	-	-
Gilgit-Baltistan	1	-	-	-	-	-
Islamabad	-	-	-	-	-	-
Total	55	2	1	22	-	-

Follow up of CCHF

In week 31, 2013, 3 suspected CCHF cases were reported, 1 each from districts Pishin, Kalat and Killa Abdullah. All the cases having history of contacts with animals at home. A total of 47 suspected, 30 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 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 were reported from Balochistan; 7 from Sindh; 6 from Khyber Pakhtunkhwa and 5 from Punjab. Table on 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/

Province		2012			2013		
		Suspected	Lab confirmed	Deaths	Suspected	Lab confirmed	Deaths
Balochistan	Afghanistan*	5	5	3	7	7	3
	Balochistan	33	18	4	33	17	4
ICT		-	-	-	2	2	-
KPK		3	3	1	-	-	-
		2	-	2	-	-	-
		4	3	2	1	1	-
Punjab		-	-	-	1	-	1
		6	3	2	1	1	1
		2	2	1	-	-	-
Sindh		7	7	3	2	2	1
Total		62	41	18	47	30	10

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 31 (3 August 2013).

Province	2012 (Week 1 - 52)				2013 (Up till week 31)			
	# of Alerts	# of Outbreaks	# of Cases	# of Deaths	# of Alerts	# of Outbreaks	# of Cases	# of Deaths
AJ&K	165	6	268	0	220	12	418	1
Balochistan	447	119	1816	31	315	56	1219	48
FATA	211	31	559	13	72	12	195	7
Gilgit Baltistan	40	1	54	0	11	1	22	0
ICT	27	2	63	0	50	2	154	1
Khyber Pakhtunkhwa	1989	108	3542	38	1032	83	2037	20
Punjab	809	40	1329	16	1022	73	8276	94
Sindh	2234	505	7353	212	114	28	3395	148
Total	5922	812	14984	310	2836	267	15716	319

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

