



WEEKLY FIELD EPIDEMIOLOGY REPORT

Volume 2 Issue 48 Nov 25 - Dec 01, 2019

Date: December 12, 2019

Provincial Technical Officers and fellows of FELTP assigned at the Disease Surveillance, Response Units (DSRU's) are working with provincial, and district health authorities on event based disease surveillance and outbreak response.

DSRUs are sharing the disease surveillance data, outbreak reports and activities of FELTP fellows to the Federal Disease Surveillance and Response Unit (FDSRU) at the Field Epidemiology and Disease Surveillance Division (FEDSD) National Institute of Health (NIH) Islamabad on weekly basis.

PDSRUs/RDSRUs. In week 48 of 2019, no new case was reported.

Diphtheria Surveillance:

During 2018 total **464** suspected cases of Diphtheria were reported. Total **544** cases reported in 2019 including **11** new case reported last week.

Dengue Surveillance:

In 2018 total **3204** Dengue cases were reported, from Sindh (**2088**) while in 2019 total **24,336** cases have been reported so far. In week **48**, 2019, Punjab (**62**), KP (**11**), Baluchistan (**45**), No report received from KP Merged Areas, ICT, KP, Sindh & AJK.

CCHF Surveillance:

In 2018 total **63** CCHF (suspected and confirmed) cases were reported from DSRUs and **75** cases have been reported in 2019. During the last week **one** new CCHF case ported from KPK

Table 2: Dengue cases reported in 2017, 2018 and month-wise distribution in year 2019(All provinces and regions)

Month	KPK	Sindh	AJK	ICT	TDs - KP	Baluch	Punjab	Total
Jan-Dec 2017	18,857	2,884	6	120	406	86	579	22,938
Jan-Dec 2018	332	2088	1	0	175	69	539	3204
Jan-19	0	143	0	0	0	12	1	156
Feb-19	0	99	0	0	0	30	0	129
March-19	0	67	0	0	0	251	0	318
April-19	1	93	0	2	2	549	1	646
May-19	1	176	0	0	37	535	1	570
June-19	5	219	0	0	0	263	4	565
July-19	33	205	0	0	4	57	38	337
Aug-19	88	0	2	140	10	6	758	1004
Sept-19	2513	1935	504	2705	235	297	2714	10903
Oct-19	2430	0	0	0	1083	346	4630	8489
Nov-19	143	0	0	0	113	340	623	1219
Total 2019	5214	2937	506	2847	1484	2686	8770	24,336

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Table 1: Weekly and Cumulative Diseases Updates Dec 01, 2019

Disease	Nov 25-30 November ,2019	Total Cases in 2019
1 CCHF	1	75
2 Varicella	20	1,190
3 Dengue	117	24,488
4 Chikungunya	0	0
5 Measles	42	6,637
6 Diphtheria	11	544
7 suspected/confirmed Seasonal Influenza	0	82

Influenza Suspected/Confirmed: In 2018, 3221 Suspected/confirmed Influenza cases were reported from

Extensive Drug Resistant/Multi Drug Resistant - Typhoid Fever Surveillance, Sindh

From November 1, 2016 to Dec, 01, 2019 total **21,096** Typhoid Fever cases reported from different districts of Sindh province. Out of these **14,320** cases found as Extensive Drug Resistant Typhoid cases.

Table 3: Reported XDR Typhoid Fever cases in Sindh by year (Nov 2016 –Dec.01, 2019)

Year	Karachi	Hyderabad	Other Districts	Sindh Total
2016	0	12	0	12
2017	175	485	4	664
2018	3,712	891	207	4,810

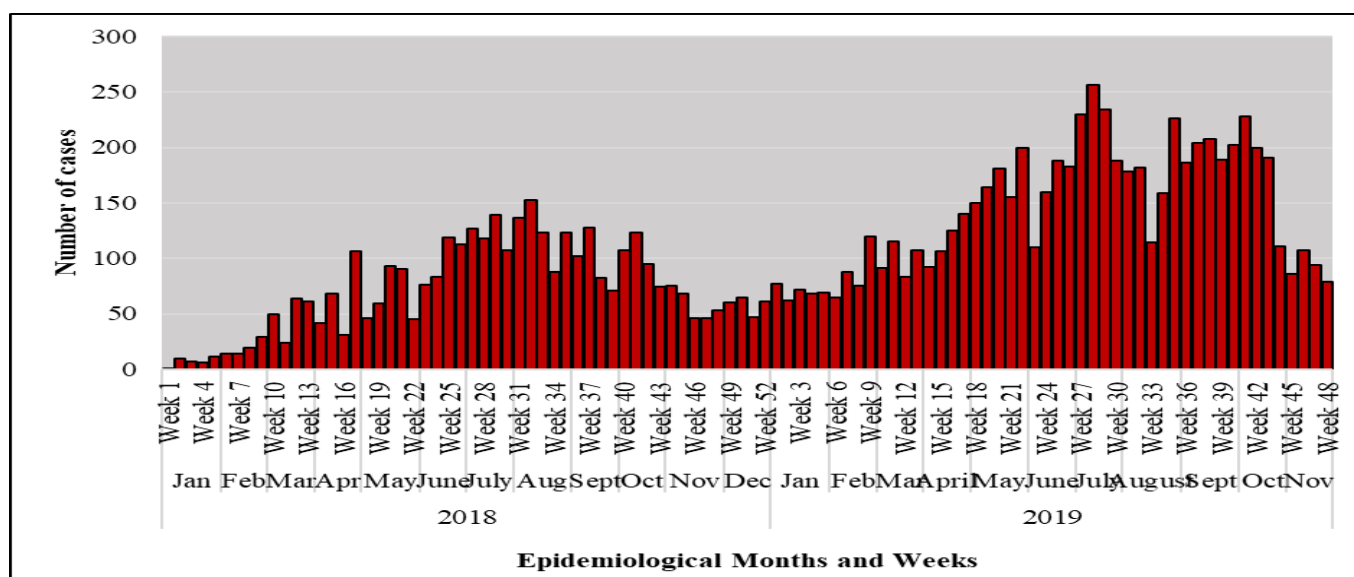
2019				
(up to Decem ber 01))	6885	1574	949	9,408
Total	10772	2962	1160	14,320

Update on Extensive Drug Resistant Typhoid Fever Karachi:

Total **15893** lab confirmed Typhoid cases reported from ten hospitals of Karachi. Out of these **10772** recorded as Extensive Drug Resistant (XDR) Typhoid Fever cases from January 1, 2017 to December 01, 2019.

In the week **48** of 2019, total **79** new XDR/MDR Typhoid Fever cases reported from different hospitals in Karachi.

Fig 1: Week wise number of XDR Typhoid fever cases in Karachi, 1st January 2018 to 01 December, 2019(Week 48)



Following cases definitions were applied to categorize the Typhoid cases reported:

Non Resistant typhoid fever:

It is defined as Typhoid fever caused by Salmonella Typhi or Salmonella Paratyphi A, B or C strains, which are sensitive to first and second line drugs (ampicillin, chloramphenicol, trimethoprim-sulfamethoxazole, cefixime and ceftriaxone). Any isolate sensitive to first line drugs but resistant to fluoroquinolone group will also be considered as Non-Resistant typhoid.

Multi-Drug Resistant (MDR) Typhoid fever:

It is defined as Typhoid fever caused by Salmonella Typhi or Salmonella Paratyphi A, B or C strains which are resistant to

the first line recommended drugs for treatment such as chloramphenicol, ampicillin and trimethoprim-sulfamethoxazole. The strain may be sensitive or resistant to fluoroquinolone group.

Extensive Drug Resistant (XDR) Typhoid fever:

It is defined as typhoid fever caused by *Salmonella typhi* strain which are resistant to first line drugs, fluoroquinolones and third-generation cephalosporin (Ceftriaxone)

The Technical Support Officer and the FELTP fellows of the Regional DSRU Karachi reached out to the major hospitals in the city and collected the Typhoid data from hospitals in

whatever form it is available. They segregated and analyzed the data for the Drug resistance pattern.

The XDR Typhoid cases were reported mostly among the children and maximum number **4421** (41%) of the XDR cases were reported in the 0-4 years age group.

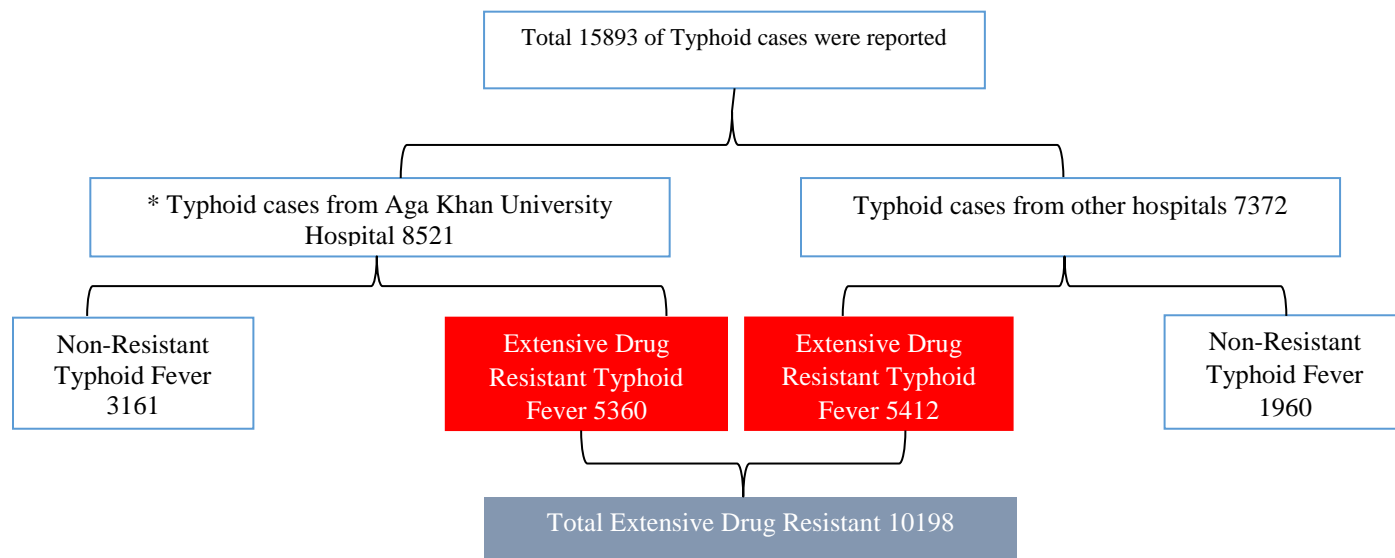
The overall attack rate was **53/100,000** population. Highest attack rate was found in 0-4 years age group i.e.162/100,000 followed by 5-9 years age group i.e. 119/100,000. Females had higher attack rate (65/100,000) as compared to males

Table 4: Age and gender specific attack rates of XDR Typhoid reported from Karachi during January 1, 2017 to December 01, 2019

Age Group	Percentage of Population	Number of Population	Number of XDR Typhoid	Attack rate /100,000
0-4 Y	13.5	2726940	4421	162
5-9 Y	13.4	2706740	3212	119
10-14 Y	12.1	2444146	1361	56

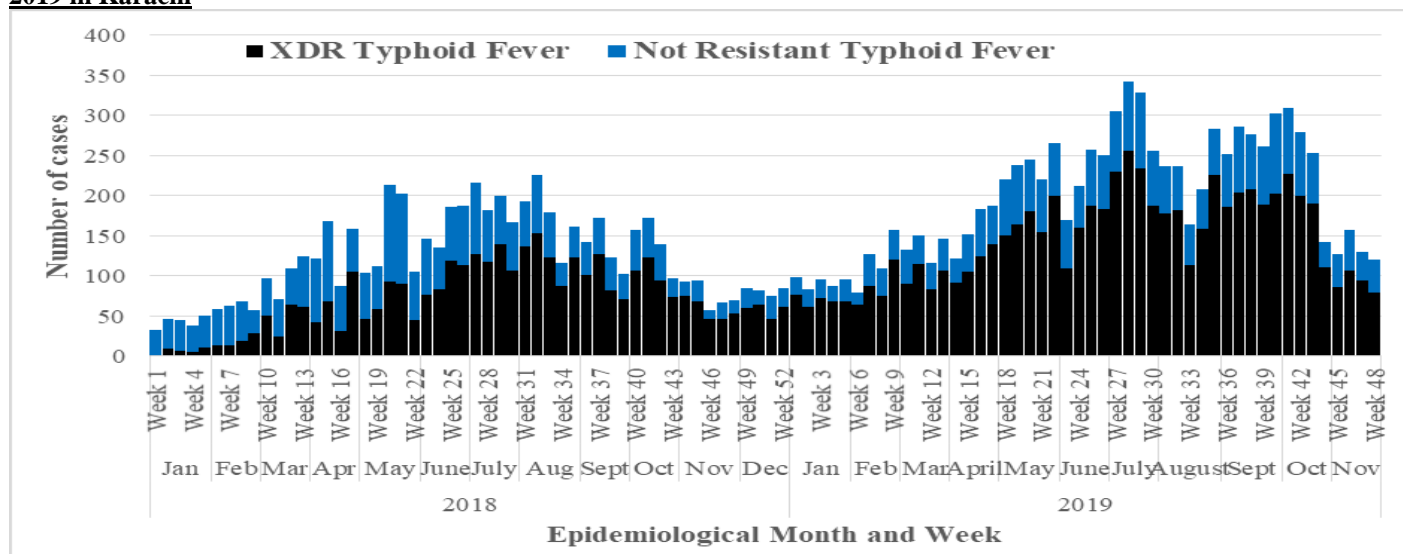
15-19 Y	11.3	2282550	678	30
20-24 Y	9.7	1959357	460	23
25-29 Y	8	1615964	274	17
30-34 Y	6.2	1252372	119	10
35-39 Y	5.4	1090776	60	6
40-44 Y	4.3	868581	46	5
45-49 Y	4	807982	43	5
50-54 Y	2.7	545388	35	6
55-59 Y	2.7	545388	22	4
60-64 Y	2.4	484789	22	5
>65	4.3	868581	19	2
Total	100	20199554	10772	53
Male	51	10301767	4357	42
Female	49	9897777	6415	65

Fig 2: Number of XDR and drug sensitive Typhoid fever cases reported from January 1, 2017 to December 01, 2019 in Karachi



* AKU does not share the complete susceptibility report of typhoid fever cases

Fig 3: Time distribution of XDR and Non-Resistant Typhoid Fever cases reported from January 1, 2018 –December 01, 2019 in Karachi



The highest Incidence Rate of the cases was reported from 5 towns: Gulshan-e-Iqbal (AR=27.1/100,000), Saddar (16.6/100,000), North Nazimabad (AR 10.7/100,000), Malir (AR 10.1/100,000), Gulberg (AR 10.1/100,000) and Gulberg (AR 9.7/100,000). While lowest Incidence was recorded in SITE town (AR=0.1/100,000).

Reported by: Dr Asif Syed TSO Karachi, Dr Anum Vigio and Dr. Ishfaq (fellows 10th Cohort)

2. Update on Extensive Drug Resistant Typhoid Fever in district Hyderabad:

The PDSRU Hyderabad at DGHS Sindh, Hyderabad is following up for the XDR/MDR Typhoid cases in District Hyderabad.

Total 5,203 Salmonella Typhoid cases reported from the November 2016 to 01 December 2019 from different districts of Sindh province excluding Karachi. Among these 4122 were of extensive drug resistant cases. Among the total Extensive Drug resistance cases 2962 (72%) XDR-cases are from District Hyderabad.

Fig 4: XDR Typhoid cases reported by month in district Hyderabad Nov 2016 - December 01, 2019

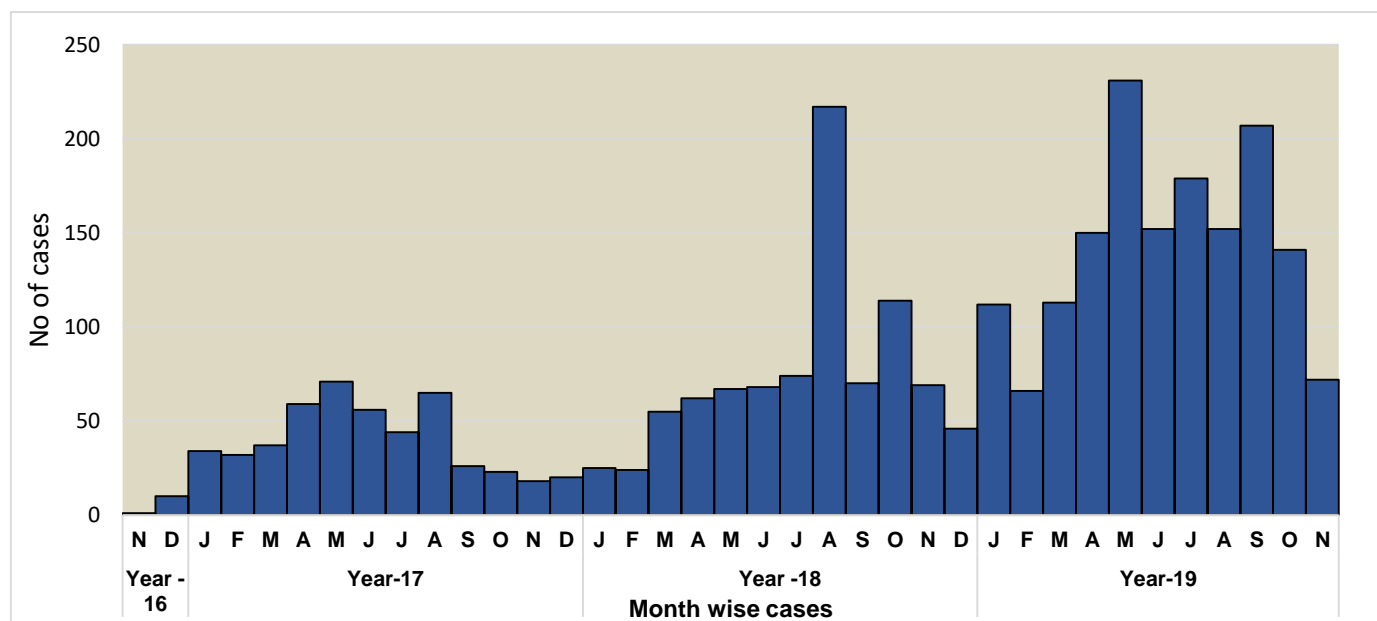


Table 5: District wise (excluding Karachi) total Typhoid and XDR Typhoid cases in Sindh (Nov 2016 -Dec 01, 2019)

Name of District	Total Typhoid cases	No of XDR cases	% XDR cases
Hyderabad	3775	2962	71.9
Tando Alha Yar	22	16	0.4
Badin	141	100	2.4
Dadu	41	34	0.8
Kashmore	55	51	1.2
Ghotki	47	41	1.0
Mirpurkhas	351	284	6.9
Sukkur	95	75	1.8
Tharparkar	23	15	0.4
Sanghar	130	113	2.7
Nau sheroferoz	49	36	0.9
Shikarpur	41	38	0.9
Tando M Khan	2	2	0.0
Jamshoro	240	192	4.7
Umar Kot	6	5	0.1
Jacobabad	13	13	0.3
SBA	17	14	0.3
Larkana	66	56	1.4
Sujawal	9	5	0.2
Matiari	4	3	0.1
Thatha	14	13	0.3
Khairpur	62	53	1.3
Total	5203	4121	79.2

The most affected age group was 0 to 4 years n=1232 with attack rate 42 per/10000 population followed by 5-9 years of age group n=904 with 31/ 10000 population. Over all attack rate is n=2962 with 13.5 /10000 population

Table 6: Age and gender specific attack rates XDR Typhoid reported from District Hyderabad (n=2962)

Age Group	XDR	Population	Attack rate/10000 population
0-4 Year	1232	295146	41.7
5-9 Year	904	292960	30.9
10-14 Year	426	264538	16.1
15-19 Year	127	247048	5.1
20-24 Year	111	212068	5.2
25-29 Year	65	174901	3.7
30-34 Year	32	135548	2.4
35-39 Year	23	118058	1.9
40-44 Year	16	94009	1.7
45-49 Year	9	87451	1.0
50-54 Year	1	59029	0.2
55-59 Year	8	59029	1.4
60-64 Year	3	52470	0.6
>65	5	94009	0.5

	2962	2186266	13.5
Male	1749	1106469	15.8
Female	1213	1079797	11.2
Total	2962	2186266	13.5

Water Analysis Report (PCR):

In 69 % (9/13) of the cases, coliforms and/ or thermo-tolerant E.coli were isolated from household drinking water. On molecular analysis, using PCR on extracted DNA from 55 water samples collected from community taps *S. typhi* DNA was detected in 12 (21.8 %) samples.

Actions Taken

- Health education was imparted to local community; Information, Education and Communication (IEC) Material distributed among the community in which safe hygiene practices including water and sanitation was communicated to the community
- School health education session carried out through health education teams.
- Mass immunization regarding typhoid vaccination: Polysaccharide vaccination was done through child survival program to the eligible children and conjugate typhoid vaccine campaign is being carried out in affected areas of district Hyderabad through collaboration of department of health and Aga khan Karachi

Sindh TCV Campaign – Report

The Department of Health, Sindh initiated the typhoid conjugate vaccine (TCV) campaign from 18-30th November 2019 by Expanded Program on Immunization (EPI) with support of EOC and UN partner staff. At the end of two weeks campaign, the program aims to vaccinate over 10 million children aged between nine months and 15 years. EPI program nominated focal person for adverse event following immunization (AEFI) at Union council, taluka and district level with objective to monitor AEFI. Information reaches at district level within 24 hours from the UC, where district focal person enter AEFI data in VLMIS system.

Situation Update

- The TCV campaign is on its catch-up days (Monday, 2nd December 2019).

- Up till the 12th, Saturday 30th November 2019, a total of 9,435,251 children were vaccinated in the campaign.
- Up till the 12th day, a total of 652 AEFI were reported to the RDSRU.
- The overall attack rate was 7 per 100,000. The highest attack rate was found in District Matiari (AR=25/100,000) followed by in District Malir (AR=14/100,000) and District Korangi (AR=12/100,000)
- Out of the 652, 65 (10%) children had to be briefly hospitalized.
- In the general reaction the most reported clinical presentation was fever more than 38 (n=162, 25%), followed by rash (n=74, 12%), swelling on body or face (n=48, 7%). Among localized reactions, severe local reaction was the commonest (n=43, 7%). Among GIT symptoms, vomiting was the most common (n=69, 11%).

Adverse event following immunization surveillance system

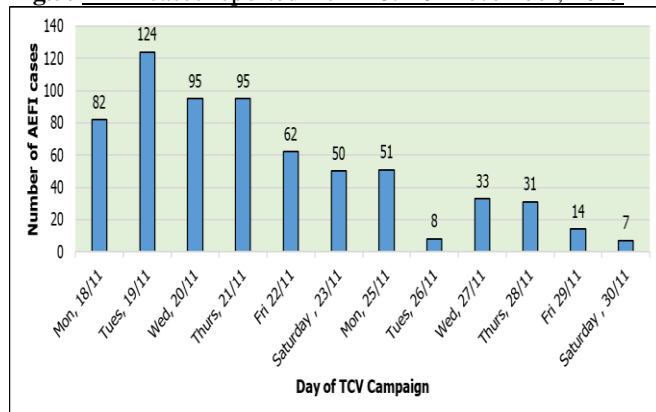
Department of Health, Sindh - Situation Report

During the campaign, Regional Disease Surveillance and Response Unit (RDSRU) of FELTP established AEFI surveillance system with the help of National Stop Transmission of Polio program (NSTOP) with objective to monitor the AEFI incidence and provide the timely response. The assigned officer (NSTOP Officer) of program is working in 23 district of Sindh out of 29.

Epidemiological Update

Over the first week of the campaign, the most number of AEFI cases were reported on Day 2, 19th November 2019 (n=124, 19%) followed by Day 3 and 4, (n=95, 15%) (Figure 5).

Fig.5: AEFI cases reported from 18th-01December, 2019



Geographic distribution of AEFI cases

The overall attack rate was 7 per 100,000. The highest attack rate was found in District Matiari (AR=25/100,000) followed

by in District Malir (AR=14/100,000) and District Korangi (AR=12/100,000) (Table-7)

Table 7. District-wise distribution of attack rates of AEFI cases from 18th-December,01, 2019

	District Name	Total Children Vaccinated	No Of AEFIs	Attack Rate /100000
1	Matiari	113653	28	25
2	Malir	620114	88	14
3	Korangi	861506	106	12
4	Naushero Feroze	178060	18	10
5	Jacobabad	143062	13	9
6	Sujawal	45239	4	9
7	Karachi West	1192396	103	9
8	Sanghar	195832	16	8
9	Jamshoro	278154	22	8
10	Karachi Central	792559	60	8
11	Dadu	298432	20	7
12	Karachi East	786005	52	7
13	Kamber	165251	10	6
14	Karachi South	432322	24	6
15	Badin	180930	10	6
16	Khairpur	315066	16	5
17	Hyderabad	621705	29	5
18	Shikarpur	210878	9	4
19	Sukkur	322605	12	4
20	Ghotki	217547	6	3
21	Kashmore	118905	2	2
22	Thatta	107005	1	1
23	Larkana	408937	3	1
24	Mirpurkhas	189119	0	0
25	Shaheed Benazirabad	290581	0	0
26	Tando Allahyar	78513	0	0
27	Tando Muhammad Khan	57331	0	0

28	Tharparkar	109954	0	0
29	Umerkot	103590	0	0
	Total	9,435,251	652	7

The median age was 10 years with a range of 1 year to 15 years (SD=3.4). Male were predominant with 340 (52%). The age group 10-15 years reported highest number of AEFI as compare to other age groups. More females in 10-15 year age group reported AEFI, whereas more males reported AEFI in 4-9 years age group. The highest attack rate was observed in 10-15 years age group (AR=10/100,000) (Table 2). The attack rates in females (AR=7/100,000)(Table-8)

Table 8. Distribution of attack rates of AEFI cases in Age and Gender of Sindh from 25th November -01 December 2019

Age Groups	Vaccinated Population	Number of AEFI (N=652)	Attack rate /100,000
9 month to 4 year	2,3706,395	59	3
4-9 Year	3,564,428	245	7
10-15 Year	3,564,428	348	10

Majority of the reported adverse events were generalized reactions (n=332, 51%) followed by localized reaction (n=136, 21%) and GIT (n=122, 19%).

Update on HIV Outbreak Investigation among Children in Taluka Ratodero, Larkana-April- 01 December, 2019

The Local Print Media Published that local health care provider reported significant number of HIV Positive children from Taluka Ratodero District Larkano. In response to that DGHSS Hyderabad deputed a team of FELTP Fellows to investigate reported HIV cases and its associated risk factors and implementation of preventive measures to halt the spread of HIV outbreak.The objectives of the investigation were

- To know the magnitude and determinants of HIV/AIDS infection
- To explore the additional contacts and sites of potential transmission of HIV infection and determine the chain of transmission of Infection.
- Formulate appropriate effective recommendations to interrupt the HIV transmission

Methods:

All the reactive/positive cases were line listed and the collected data organized and analyzed. Laboratory based Surveillance was initiated and on daily basis screening of high-risk population was carried out at Taluka Hospital

Ratodero district Larkana to identify new additional Cases. The data were collected using a structured questionnaire. Demographic, Clinical and exposure/contact information was collected to determine the risk factors and to monitor the behavioral patterns of the population.

HIV-infected persons from two or more different households of the same house or street of Ratodero were identified as geographical clusters

- A family was defined as parents, their children and grandchildren.
- Two or more families having maternal or paternal relationship were considered relatives of each other.

Results:

Total N=1198 HIV cases are reported so far from Ratodero larkana up to 30/11/2019; in which total n=954 (79.6%) are children with Child males are n=589 (49.2%) and child females n=365(30.5%) while the total adults are n=244 (20.2%) in which adult males are n=64 (5.2%) and adult females n=180 (14.7%)(Table-9)

Week wise distribution of cases shows that maximum cases were reported during April and may 2019 and cases have declined towards week 4 ,November 2019(Fig.6)

Figure-6: Week wise distribution of HIV cases

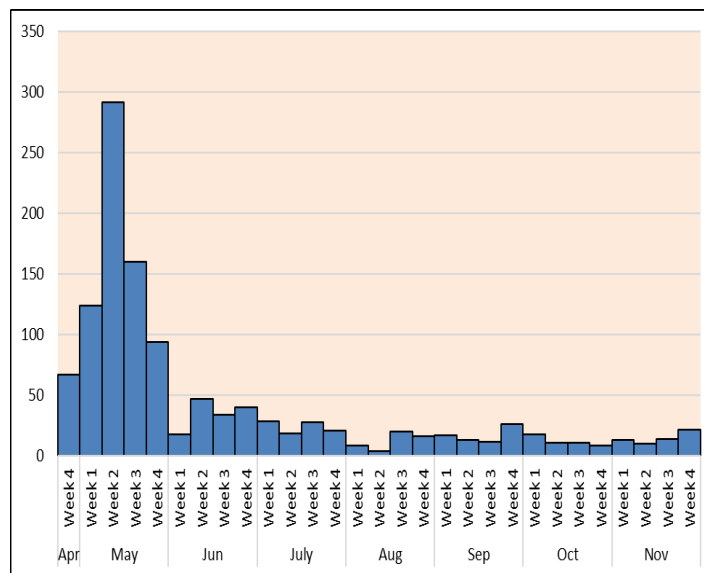
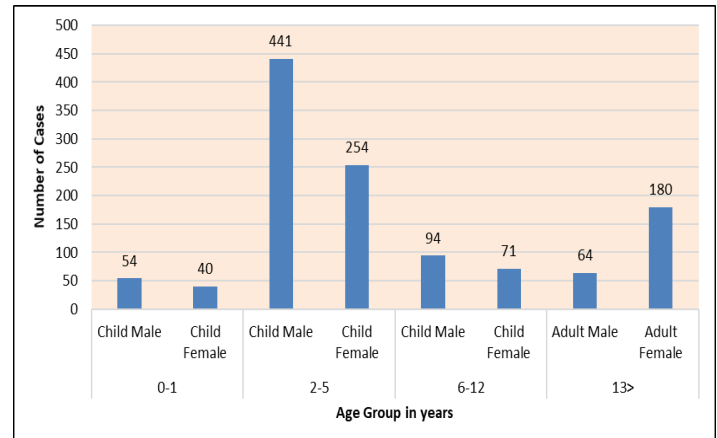


Table 9: CDR of HIV in screening campaign-Larkana

MONTHS	WEEKS	SCREENED FOR HIV	HIV CASES	CDR%
Apr	Week 4	1295	67	4.7
May	Week 1	3807	124	2.2
	Week 2	4980	292	2.2
	Week 3	8089	160	2.2
	Week 4	4858	94	2.9
	Week 1	2746	18	2.5
	Week 2	698	47	2.4
	Week 3	1629	34	3.7
	Week 4	1253	40	3.5
	Week 1	1080	29	2.7
	Week 2	804	19	4.3
	Week 3	702	28	3.9
	Week 4	508	21	4.1
	Week 1	510	9	3.4
	Week 2	387	4	12.2
	Week 3	293	20	4.6
	Week 4	282	16	7.7
	Week 1	304	17	8.2
	Week 2	381	13	7.1
	Week 3	207	12	4.8
	Week 4	383	26	7.6
	Week 1	250	18	4.6
	Week 2	339	11	3.2
	Week 3	279	11	3.9
	Week 4	362	9	2.4
	Week 1	268	13	4.8
	Week 2	196	10	4.0
	Week 3	180	14	7.2
	Week 4	226	9	3.9
	Total	37296	1185	3.17

The age group distribution among the reported HIV infection revealed most affected age group was 2-5 Year of child males n=441 (36.4%) followed by child females n=254 (20.9%) while the age group 6-12 Years child males n=94 (8.1%) and child females n=71 (6.1%) respectively. All cases were

Reactive on Rapid Diagnostic test (RDT) by Sindh AIDS Control Program (SACP)(Fig.7)

Fig 7: Age and Gender distribution of HIV cases Larkana**Table 10: Summary statistics of HIV cases-Larkana**

Variables	Numbers
Total No. of Cases/Screened	1185/ 37296
Age Range	Age Range: < 1 Month to 70 years
Male to Female Ratio	Male: n=646(54.5%) Female n=539(45.4%)
Most affected age groups	2-5 Years n=686 (57.8%)
Over all Case Detection rate (CDR)	3.17%

Actions Taken:

- Established Screening Camp at THQ Hospital by SACP with the collaboration of PPHI Ratodero Larkana
- Establishment of HIV/AIDs ART Treatment Center at Shaikh Zaid children Hospital Larkano.
- Unauthorized laboratories, Blood banks and Clinics have been closed by Antiquary Team by Health Department and Health care commission with support of District Administration
- Awareness and Health education sessions has been conducted in Communities about Spread and Transmission of HIV/AIDs.
- Developed the communication and coordination between District health authority and HIV program.

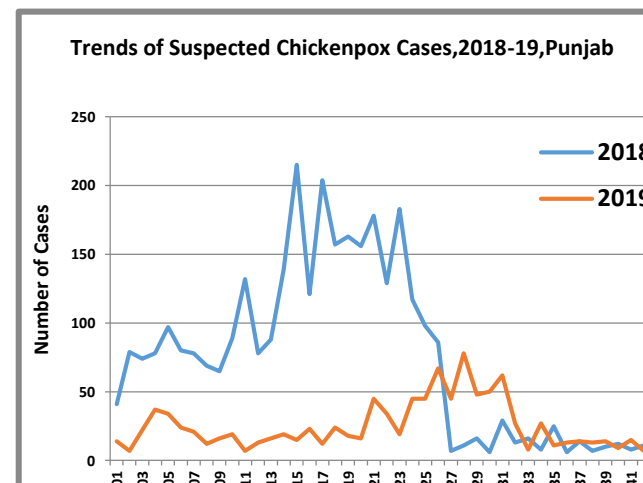
- Comprehensive analysis has been carried out by National and International experts to find out the reasons of upsurge of HIV Cases in Ratodero Larkana.
- Comprehensive analysis has been carried out by National and International experts to find out the reasons of upsurge of HIV Cases in Ratodero Larkana.

Reported by: *Dr Naveed Memon TSO Hyderabad, Dr Santosh, Dr Munaza (fellow, 11th cohort), Dr Mudassar (alumnus, 9th cohort)*

25-29 Yrs.	157	1.6
30-34 Yrs.	135	1.8
35-Above	231	0.7
Total	4562	3.5

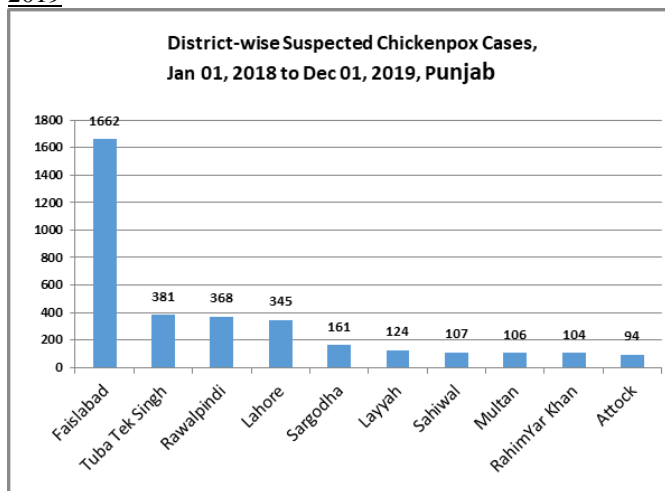
High attack rate was observed in children aged 5-9 yrs. (8.6 /100,000) followed by 0-4 yrs. age group (7.0/100,000).

Fig 9: Comparative study of Varicella cases 2018 -2019



The highest number of cases was reported from District Faisalabad. The cases are mostly from two locations (Thandiwallia and Jaharanwalla) in Faisalabad District.

Fig 10: Distribution of Chickenpox Cases in Punjab, 2018-2019



Reported by: *Dr Mohsan Wattoo TSO Lahore, Dr. Tahir Muneer, Dr. Shehzad Naseem (fellows 12th cohort)*

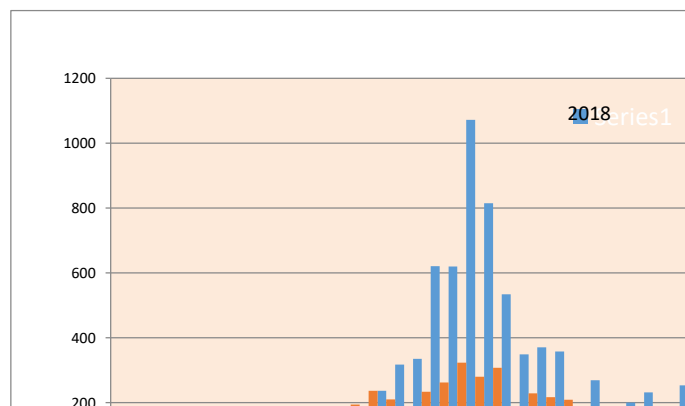
Update on Dengue Outbreak Investigation in district lasbela-Baluchistan:

A total of 487 dengue cases have been identified. During current week, sixteen (16) new cases of dengue were reported. The mean age of dengue cases was 29 years with age range <1 year to 65 years. The male to female ratio was about 2:1.

Update Measles Surveillance Report Punjab:

The PDSRU Punjab is regularly assisting with data analysis and information sharing with the health department officials. During the period from week 1-52, 2018 a total of **11,991** suspected Measles cases were reported. The highest number of suspected Measles cases (**n=1072**) was recorded during the week 21, 2018. In week **48**, 2019, total **14** new cases of suspected Measles were reported.

Fig 8: Weekly suspected Measles Cases-Punjab (2018 and 2019)



Update /Follow-up Varicella Surveillance in Punjab:

The total number of cases reported from Jan 01, 2018 till December 01st, 2019 is **4,562**.

Table 11: Age specific attack rates of Varicella in Punjab in 2018-2019

Age Group	Total number of Cases (2019)	AR/100,000
0-4 Yrs.	1172	7
5-9 Yrs.	1581	8.6
10-14 Yrs.	747	4.9
15-19 Yrs.	305	2.2
20-24 Yrs.	234	2

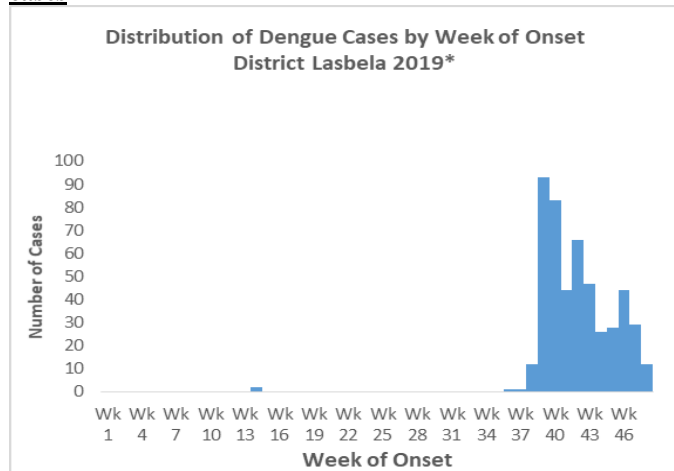
Majority of cases 48.3% (n=226) were among age group 16-30 years, followed by 32.9% (n=154) among 31-45 years age-group while 13.5% (n=63) were among ,1-15 years of age group. The overall attack rate was 28.32/10000 Population.

Table 12: Age group distribution of Dengue cases-Lasbela-Baluchistan

Age Group (Years)	Cases (n=487)	Percentage (%)	Pop. of Age Group	Attack Rate/10000 Pop
< 1-15	63	13.5	74728	8.43
16-30	226	48.3	50526	44.73
31-45	154	32.9	39323	39.16
46-60	23	04.9	29607	7.77
61-75	1	00.1	11295	0.89

The epidemiological curve showing index case reported on week 36th, 2019, then the cases started reporting from 37th week of 2019 and peak was reached on 39th week 2019. There is decreasing trend in dengue cases after 42nd week 2019 due to control measures and decrease in temperature.

Fig 11: Epi curve showing time distribution of Dengue cases



Among the total 487 cases, males 67.56% (n=329) were more affected than female 32.44% (n=158).

Majority of confirmed Dengue case are reported from Union councils Berot, Vindor and Patara.

Mosquito, Pupae & Larvae Survey:

The entomological surveillance was also conducted in areas where clustering of dengue cases found in September 2019. The table below shows results of container and breteau index.

Table 13: Breteau Index at Hub Town

Name of Locality	Number of Containers	Container Positive	Container Index
Zehri street	21	3	14.3
Adalat Road	28	7	25.0
Madina Colony	32	11	34.4
Mehmood Abad	34	14	41.2

Table 14: House Index at Hub Town

Name of Locality	Number of Houses inspected	House Positive	House Index
Zehri street	26	3	11.5
Adalat Road	33	6	18.2
Madina Colony	35	9	25.7
Mehmood Abad	38	11	28.9

ACTION TAKEN:

1. FELTP, Department of Health and WHO mission visited and conducted dengue outbreak investigations at district Lasbela to support district health team in controlling current outbreak.
2. More than 100 Health Care workers have been trained on Aedes identification, detection and elimination including awareness sessions too.
3. The dengue cases management training of Health Care providers has been conducted at Hub and Uthal.
4. Awareness sessions (12) conducted in Community particularly for School and college students
5. An isolation wards for admission of dengue cases has been established with the all facilities at Jam Mir Ghulam Qadir Hospital Hub and DHQ Hospital Uthal.
6. Private hospitals are included in surveillance network and were reporting suspected and confirmed dengue cases on daily basis.

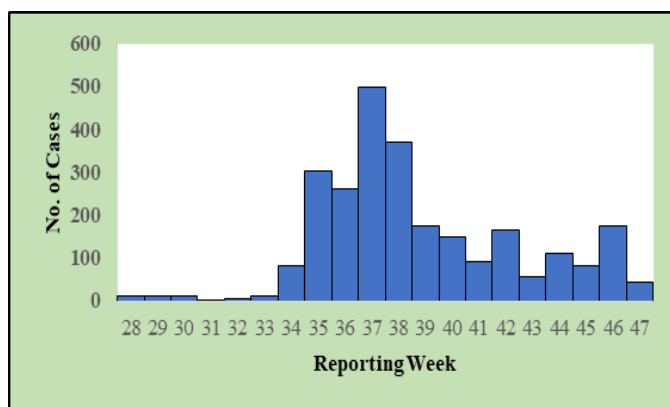
7. Weekly Epidemiological Report regularly shared with district and province Health Department for update and further necessary actions.
8. FELTP_PDSRU, WHO, VBD and Health Department working on short and long terms measures to control dengue outbreak.
9. Provincial Disease Surveillance and Response Unit (PDSRU) Quetta declared as Dengue Response Unit Baluchistan
10. The VBD program has provided 2000 NS1 kits and 200 LLINs for outbreak response activities in district Lasbela.
11. The dengue surveillance system established and made functional in district Lasbela.
12. Larviciding, IRS and Fogging (Shoulder & ULV) in Hot spot of Hub chowki conducted

Reported by: Dr Ehsan Ahmed Larik (TSO), Dr. Jan Inayat, Dr. Khair Mohammad & Dr. Zubair Bugti (Fellows 12th Cohort)

Update on Dengue Fever Surveillance-KP:

In current week, total 11 dengue fever cases reported across the province. Majority of cases reported from district Peshawar. Total number of laboratory confirms cases are 7005. After the dengue fever epidemic of 2017, Dengue fever is endemic in district Peshawar considering the abundance of dengue fever risk factors which includes; Urban population, indoor storage of water and poor sanitation conditions. Since June, 2019 a total of 2695 laboratory confirmed cases have been reported from different health facilities of district Peshawar including major teaching hospitals/MTIs. In current week 07 new cases reported. Cases started to rise in week 34 and achieved peak in week 36.

Fig 12: Epi curve showing Dengue fever cases reported in KP



Among high burden areas, Shiekh Mohammadi was most affected with over-all attack rate of 8.4 per 1000 population

Table 15: Summary statistics of Dengue Fever cases Peshawar -KP

Total number of Suspected / Confirm cases	2695
Most affected UC (Shiekh Mohammadi)	AR 8.4/1000 Population
Median Age	25 years (4 - 92)
Male female proportion	51% - 49%

Age groups of 15 – 19 and 25 – 29 years were most affected. Male cases were slightly higher than females with median age of 25 years.

Continuous response activities are being carried out across Peshawar specifically most affected union councils. Multi-sector response has been implemented involving all line-departments. Department of health is working on ‘‘Dengue Action Plan for 2019 – 2020’’ in consultation with all stake holders

Reported by: Dr. Wasif Shah (TSO)