

Quarter-4 report of VRDLNs (Oct 1, 2014- Dec 31, 2014) NIE, Chennai

This is a consolidated quarterly news report (Q4) based on the quarterly reports received from 13 VRDLN labs. The report comprises of the outbreaks reported from the labs which have processed the samples. The report also includes the pooled number of positive cases for each virus by each lab, based on the monthly reports received.

Central & West networking Labs

Jabalpur VRDL

Dengue outbreak at Bhopal- The state capital recorded more than 600 cases of dengue in the month of Oct and November 2014. Three serotypes [DEN 1,2 & 3] were reported circulating in the city. The number of outbreak samples processed by lab during the investigation not reported.

Measles cluster at Jabalpur in December in Hussain nagar and Makka nagar, slum areas of Jabalpur. **3/7** cases investigated were measles IgM positive.

Jaipur VRDL processed **1081 samples with 3594 tests** in this quarter (2071 by serology, 1523 by PCR). No outbreaks reported.

East & North networking labs

Bhubaneswar VRDL

AES Cases were investigated in Malkangiri District in November. Affected villages included Potrel, Kodiguda, Drumaguda, Urumaguda, Sandodiguda, Gomphakonda. 15 cases with acute onset fever and altered sensorium - only 1 survived. JE, Chandipura, Entero, HSV, Dengue, West-Nile and Nipaha were negative; one positive for HSV and one positive for Dengue. Measles and Chik were being tested. Further reports awaited.

Hepatitis-E Outbreak at Sambalpur in December -The urban areas affected were Tamalapada 1 and 2, Kunjalpada, Jhaduapada, Daleipada and Ramjiguda. 290 individuals were examined and in **35/49** (71.42%) samples were positive for HEV antibodies. The source was noted to be leaking drinking water supply pipes

with sewage lines. The lab overall tested 1080 samples (962 hospital samples & 118 of outbreak).

Lucknow VRDLN reported Dengue outbreak from Bharwara village, Viraj Khand, Gomti Nagar in November. **9/ 33** serum samples collected were positive for Dengue IgM. The lab samples from 1750 patients (3218 by serology, 2071 by PCR/RTPCR)

Patna VRDL reported **Unknown Mysterious disease at Gaya** district (Bihar) continued from last quarter. No further details reported.

Outbreak of acute diarrhea in November reported in Mubarakpur, Danapur, Patna. Stool samples were tested for Rotavirus, Adenovirus, Astrovirus and Norovirus and none was found positive.

The lab processed 1872 samples (2134 by serological tests, 159 by PCR)

Ranchi VRDL processed **305 samples** (136 were for vector-borne disease viruses, 102 for viruses transmitted by blood or body fluids, 65 for viruses transmitted by faeco-oral route and 2 for viruses transmitted by respiratory route). Decreased activity of Dengue noted in December.

South networking Labs

Chennai VRDL

The lab tested **1609 samples** (148 for respiratory viruses, 159 for faeco-oral viruses, 807 for vector-borne disease viruses, 418 viruses transmitted by blood and other body fluids. Hepatitis A cases were more in the month of December.

-JE and Chikungunya cases were consistently reported positivity was reported in all the months, increase in the number of cases when compared with the third quarter. (more than three folds increase when compared to the previous quarter) Positivity of Chikungunya cases also showed an increasing trend in the three months of the quarter.

-Measles cases were high in October. There was an increased trend of CMV cases, were reported in all the

months and positivity was more in December. Activity of EBV was consistent throughout the quarter, but positivity declined in December. **2/5** cases of Mumps reported was positive.

-The activity of pH1N1 virus was reported in December. Six pH1N1 positive cases were detected in the month of December. Activity of both seasonal and Influenza A/H1N1 (pdm09) was significantly higher when compared with the third quarter. RSV cases showed a decrease in this quarter.

Manipal VRDL

- The VRDL tested **1282 patients with 2327 samples**. Of these, 271 samples were screened for respiratory viruses, 270 for faeco-oral viruses, 1242 for vector-borne disease viruses, and 544 for miscellaneous viruses. Decreased activity of Influenza A/H1N1 (pdm09) and Influenza A (H3N2) activity in Kerala and Karnataka state. Decreased activity of Dengue observed

-JE outbreak (7 cases) reported from Karnataka in Hangal Taluk, Haveri District, Karnataka (1 case in Nov), Jeerahalli Gangavathi Village & Post Koppala District, Karnataka(1 case in Nov), Chitradurga Taluk Chitradurga District Karnataka(1 case in Nov), Harihara Taluk Davangere District Karnataka (1 case in Dec), Puttur Taluk, Dakshina Kannada District, Karnataka (1 case in Dec), Puttur Taluk, Dakshina Kannada District, Karnataka (1 case in Dec), Bajpe Village Mangalore Dakshina Kannada District Karnataka (1 case in Dec)

-Kysanur Forest Disease (KFD) outbreak in December from Nagamala, Chola Naikar colony (Scheduled Tribe) in Nilambur forest (23 Km inside the forest), Karulai, Nilambur, Malappuram, Kerala State. Acute Febrile illness with Monkey deaths reported. One was tested positive for KFD Real time PCR and his 5 family members tested negative.

Alappuzha VRDL

-VRDL processed **633 numbers of samples with 1263 tests**. Individually by virus, 183/259 CHIK (IgM &PCR), 9/140 Entero (PCR), 24/40 HAV (IgM+ PCR), 16/127 CMV (IgM+ PCR) positive were reported.

-Chikungunya outbreak in Fort Kochi in October with fever cases from Mahajanavadi, Maliyekkar parambu, pulimootil (Corporation colonies), Chithuparambu,

Hassan colony, Puthuvaseeri parambu, Kombaramukku, odathaparambu, Thuruthi, Mehaboob colony and Eruveli colony areas of Kochi municipal corporation. 305 clinical cases encountered and 197 blood samples were collected. **167 were positive** for chikungunya, 3 positive for Dengue IgM, one case with co-infection. 16/ 60 samples were positive for chikungunya virus by PCR (details not reported). Stored drinking water in the containers were noted to be the source.

-Dengue outbreak in Malapuram in villages near to Manjeri town (**1/7** samples collected were positive for Dengue IgM) and in Tanur area (**2/3** were positive for dengue IgM).

-Hepatitis A outbreak reported in Malapuram from school children in Areacode West Panchayat. A total of 28 blood samples and 7 stool samples were collected and tested for Hepatitis A and E. Out of that **18** blood samples and **6** stool samples positive for Hep A IgM and PCR respectively. A teacher, positive for Hep A, served mid-day meals for children.

Hyderabad VRDL tested **920** samples, reported positive dengue (74/454 by IgM & 36/202 by rapid tests). Others details were not obtained. Swine flu under surveillance - **1/18** of the suspected & admitted cases of influenza was positive by RTPCR.

Thiruvananthapuram VRDL tested **1384 samples from 1298 patients** (605 by serology, 85 by conventional PCR and 677 by Quantitative PCR).

Port Blair VRDL processed **998 samples** for Dengue, Chikungunya, Coxsackie virus, Influenza A, RSV, Para-Influenza 1/2/3, Norovirus, Sapovirus, Astrovirus, HMPV, Adenovirus, Enterovirus, Hepatitis-B, CMV, HHV-6 and EBV. 53/593 were positive by serology, 73/1091 by PCR.

Upsurge of HFMD in South Andaman Islands from last quarter- Clinically suspected Hand Foot Mouth disease (HFMD) cases. 34/60 of clinically confirmed samples were found positive for Enterovirus by PCR. Molecular characterization revealed the circulating strain as Enterovirus 71 and Human Coxsackie virus A6.

Vishakapatnam VRDL processed **1014 samples** (236/1006 were positive by serology and all 8 were negative by PCR). No outbreaks reported.

Respiratory virus

Lab Location	Adeno	Measles	VZV	RSV	Influenza*	Influenza (H1N1)	Para-influenza
Manipal	5/122	8/115	5/220	1/80	12/271	8/271	0/10
Port Blair	2/92	NT	NT	0/141	NT	NT	NT
Lucknow	1/8	16/81	8/179	0/3	0/2	1/10	0/3
Orissa	2/34	4/7	NT	0/7	1/11	0/6	4/12
Jaipur	22/155	NT	1/90	19/57	3/66	2/78	12/102
Tvpm	1/21	NT	NT	0/2	6/21	0/12	NT
Alappuzha	1/32	0/2	0/6	1/28	NT	NT	NT
Chennai	1/30	18/42	9/66	1/17	NT	6/73	0/2
Ranchi	NT	NT	NT	NT	NT	NT	NT
Vizag	0/10	0/8	0/6	0/14	0/3	0/3	NT
Jabalpur	NT	3/9	NT	13/64	0/9	9/63	NT
Patna	11/39	NT	0/21	NT	0/10	NT	NT
Hyderabad	NT	NT	NT	NT	NT	1/18	NT
Total	46/543	49/264	23/588	35/458	22/393	27/534	16/129

Numerator- No. positive, Denominator- No. tested, NT: Not Tested. H1N1 listed above is tested by PCR.

*Influenza (A, B, not specified) & Para-influenza 1,2 tested by PCR. VZV & measles listed are tested by IgM & PCR. RSV & Adenovirus listed are tested by PCR

GE viruses

Vector-borne viruses

Lab code	Rota	Entero	Hep-A	Hep-E	Lab code	Dengue	CHIK	JE	WN
Manipal	1/6	6/297	2/3	0/3	Manipal	200/1604	10/61	6/105	2/12
Port Blair	NT	7/182	NT	NT	Port Blair	54/573	2/54	NT	NT
Lucknow	NT	1/214	37/191	30/187	Lucknow	203/942	2/45	30/511	NT
Orissa	55/90	2/23	8/97	58/128	Orissa	35/182	4/68	10/24	0/3
Jaipur	17/53	0/144	74/321	107/321	Jaipur	50/177	0/4	0/90	0/90
Tvpm	NT	0/3	NT	NT	Tvpm	0/1	0/2	NT	0/4
Alappuzha	0/2	9/140	18/32	1/30	Alappuzha	4/233	183/259	1/137	0/47
Chennai	NT	0/90	51/185	1/102	Chennai	130/812	62/163	16/236	0/31
Ranchi	2/3	NT	5/23	2/22	Ranchi	24/72	0/10	13/51	NT
Vizag	0/6	0/18*	2/34*	2/33*	Vizag	192/725	38/116	1/11	0/10
Jabalpur	NT	NT	35/133	32/135	Jabalpur	412/1086	7/111	NT	NT
Patna	18/290	0/3	2/263	5/263	Patna	55/490	0/10	0/140	NT
Hydrbd	NT	NT	NT	NT	Hyderabad	6/76	NT	NT	NT
Total	93/450	25/1114	234/1282	238/1224	Total	205/6973	308/903	77/1305	2/197

Numerator- No. positive, Denominator- No. tested, NT: Not Tested.

Rotavirus listed includes tests by both Electrophoresis & Rapid diagnostic tests. Hep-A, E by IgM ELISA, Enterovirus by PCR

* Awaited results from Vizag are presumed as not positive for Dec month

Numerator- No. positive, Denominator- No. tested, NT: Not Tested.

Dengue listed includes tests by IgM, PCR & NS1 antigen detection/rapid tests. JE, West Nile (WN) & CHIK listed includes tested by IgM & PCR.