Ministry of Health and Sports
Department of Public Health
Central Epidemiology Unit
Monthly Epidemiology BULLETIN

May, 2018

AFP surveillance Indicators by State and Region, 2018*

State/Region	<15 Population	Minimum Expected Non Polio AFP Cases (2/100,000 pop)	Total no. of reported AFP Case	Non-Polio AFP Case	Annualized AFP Rate	Annualized Non-Polio AFP Rates	% of Adequate Stool
Ayeyarwady	1,653,018	33	9	5	1.29	0.71	89
Bago	1,282,089	27	22	17	4.06	3.13	100
Chin	187,080	2	0	0	0.00	0.00	0
Kachin	442,109	8	0	0	0.00	0.00	0
Kayah	94,003	2	2	1	5.03	2.51	50
Kayin	521,924	11	2	2	0.91	0.91	100
Magway	985,189	19	7	7	1.68	1.68	86
Mandalay	1,442,973	28	17	15	2.78	2.46	100
Naypyitaw	288,213	5	1	1	0.82	0.82	100
Mon	591,424	11	5	3	2.00	1.20	100
Rakhine	833,457	17	9	7	2.55	1.99	100
Sagaing	1,413,760	33	8	6	1.34	1.00	100
Shan East	227,670	4	0	0	0.00	0.00	0
Shan North	722,544	12	4	4	1.31	1.31	100
Shan South	735,534	12	2	2	0.64	0.64	100
Taninthayi	454,875	11	2	1	1.04	0.52	50
Yangon	1,550,049	29	6	3	0.91	0.46	83
Total	**13,425,911**	264	96	74	1.69	1.30	95

Acute Flaccid Paralysis (AFP)

Total no. of expected non-polio AFP cases - 264

Annualized expected Non Polio AFP Cases (as of week.22) - 112

Reported AFP cases - 96

Discarded as non-polio AFP cases—74

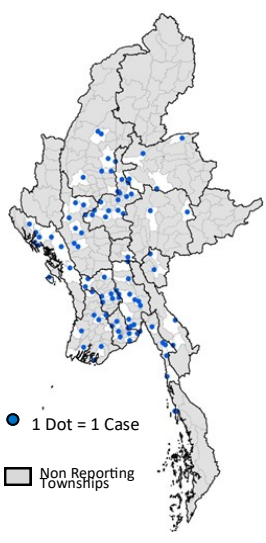
Annualized AFP rate - 1.69

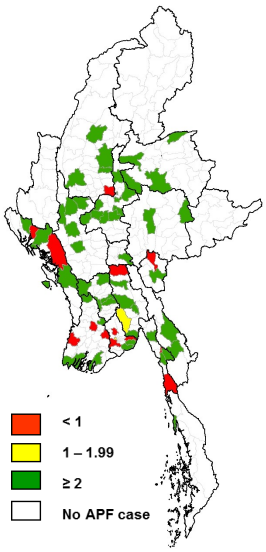
Annualized Non-polio AFP rate - 1.30

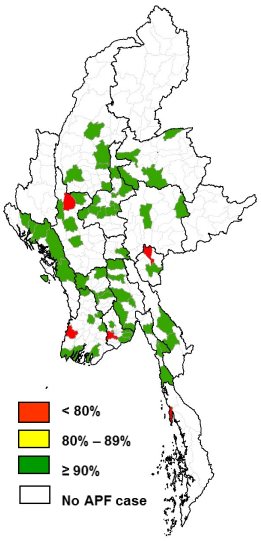
Percentage of adequate stool collection - 95%

**Data as of 31 May 2018*

(week no. 22)

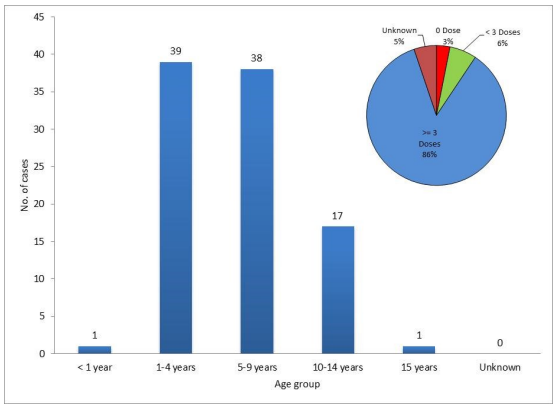






Spot Map of AFP Cases Annualized Non polio AFP rate % of Adequate stool collection

Age group and vaccination status of AFP cases, 2018*



Environmental Surveillance in Myanmar

Poliovirus and NPEV detected in Sewage samples in Myanmar, 2018*

Sampling site	week number																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Yangon																					
Sitwe																					
Maungdaw																					

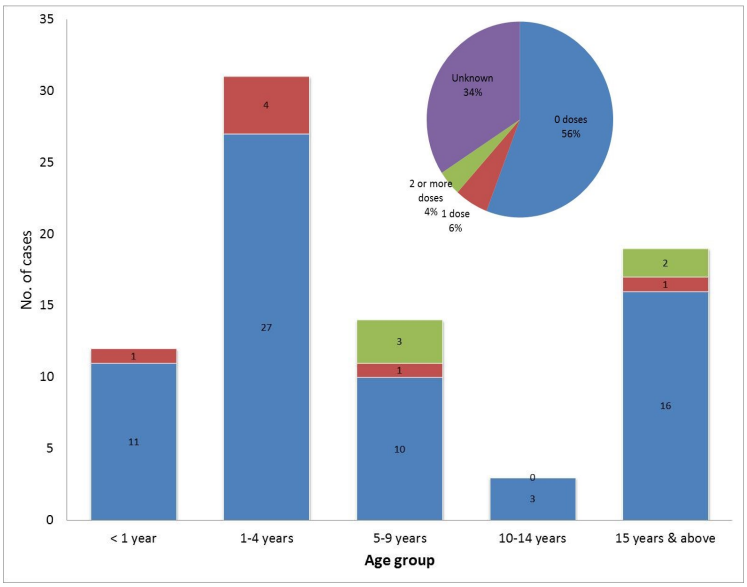
Type 1 Sabin
Type 1 VDPV
Type 2 Sabin
Type 2 VDPV
Type 3 Sabin
Type 3 VDPV
Type 1 Sabin + 3 Sabin
Wild polio type 1
Wild polio type 3
NPEV
Negative for Polio and NPEV
Result pending
Sampling not scheduled

* Data as of week no. 22, 31 May 2018

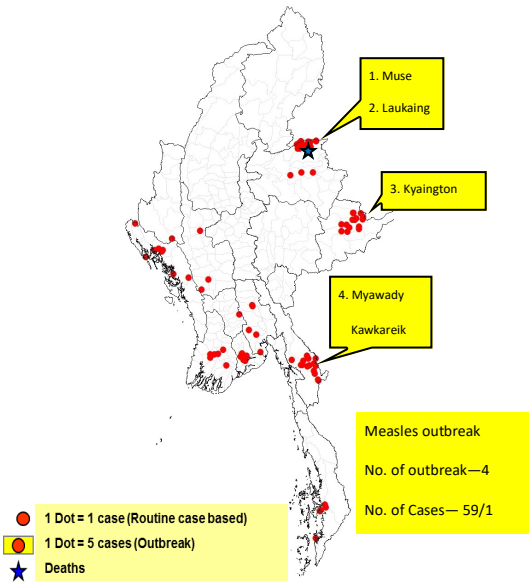
Fever with Rash Surveillance, 2018*

State/Region	Total Population	Expected Non-measles suspected measles Cases	Suspected cases reported	Total Serum Specimen tested in Laboratory	Confirmed Measles			Confirmed Rubella	Non Measles Non Rubella Cases	Pending	Annualized incidence of non-measles/non-rubella suspected measles cases
					Lab-confirmed	Epi-confirmed	Clinically confirmed				
Ayeyarwady	6437373	129	13	13	6	0	0	0	7	0	0.11
Bago	5177071	104	32	32	6	0	0	0	25	1	0.48
Chin	532750	11	3	3	0	0	0	0	0	3	0.00
Kachin	1625316	33	1	1	0	0	0	1	0	0	0.00
Kayah	310330	6	0	0	0	0	0	0	0	0	0.00
Kayin	1664092	33	23	23	11	4	0	0	6	2	0.36
Magway	4327568	87	4	4	2	0	1	0	1	0	0.02
Mandalay	6206034	124	1	1	0	0	0	0	1	0	0.02
Mon	2321587	46	4	4	0	0	0	0	0	4	0.00
Nay Pyi Taw	1111897	22	3	2	0	0	1	0	2	0	0.18
Rakhine	2846882	57	17	17	9	0	0	0	7	1	0.25
Sagaing	5646315	113	1	1	0	0	0	0	0	1	0.00
Shan East	845364	17	15	8	6	9	0	0	0	0	0.00
Shan North	2507456	50	39	18	12	24	0	0	2	1	0.08
Shan South	2413792	48	2	2	0	0	0	0	1	1	0.04
Tanintharyi	1528308	31	5	5	5	0	0	0	0	0	0.00
Yangon	6848946	137	62	62	23	0	1	2	36	0	0.53
National	**52351081**	1047	**225**	**196**	**80**	**37**	**3**	**3**	**88**	**14**	**0.17**

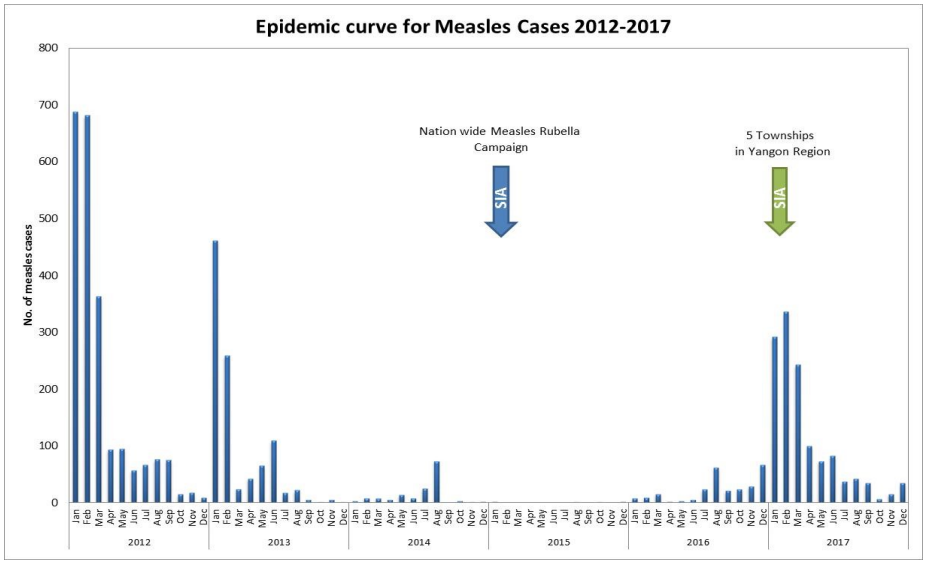
Age and Vaccination Status of confirmed Measles cases, 2018*



Spot map of measles cases, 2018*



Epidemic curve for Measles Cases 2012-2017



CRS Surveillance

Total no. of serum sample received - 3

Total no. of serum sample tested- 3

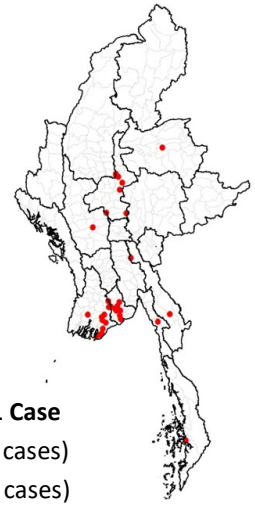
Laboratory Results - Negative

* Data as of week no. 22, 31 May 2018

Diphtheria, 2018*

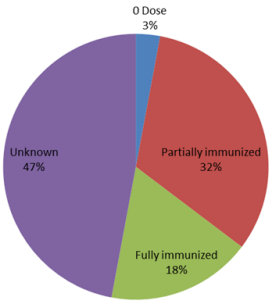
Reported Diphtheria cases and deaths in State and Region

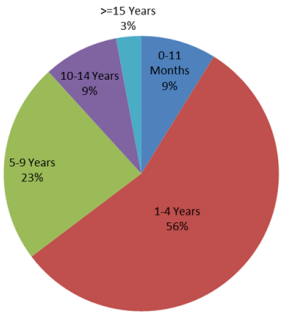
State/Region	Total
Yangon	18
Shan South	11
Ayeyarwaddy	4
Bago	3
Rakhine	2
Mandalay	1
Shan North	1
Grand Total	40



1 Dot = 1 Case
Case (40 cases)
Death (7 cases)

Immunization Status of Diphtheria Cases

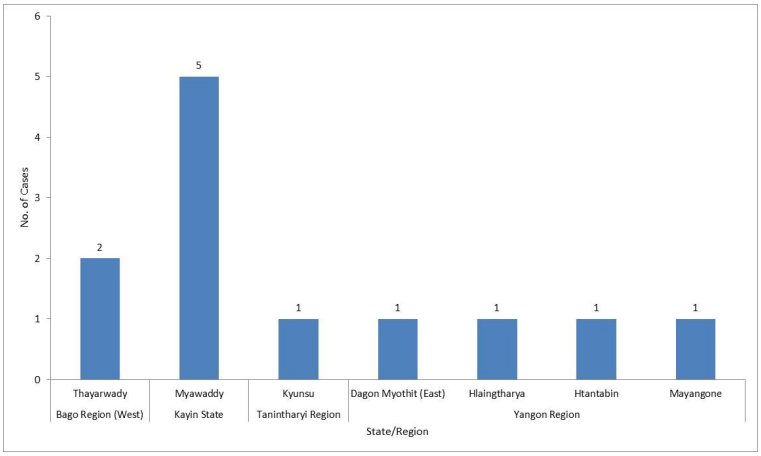




Diphtheria Cases by Age group

Pertussis (Whooping Cough), 2018*

Cases distribution of whooping cough cases in State and Region



Age group	0 Dose	1 Dose	2 Doses	Total
0-11 Months	4	1	1	6
1-4 Years	1			1
5-9 Years	3			3
10-14 Years	2			2
Grand Total	10	1	1	12

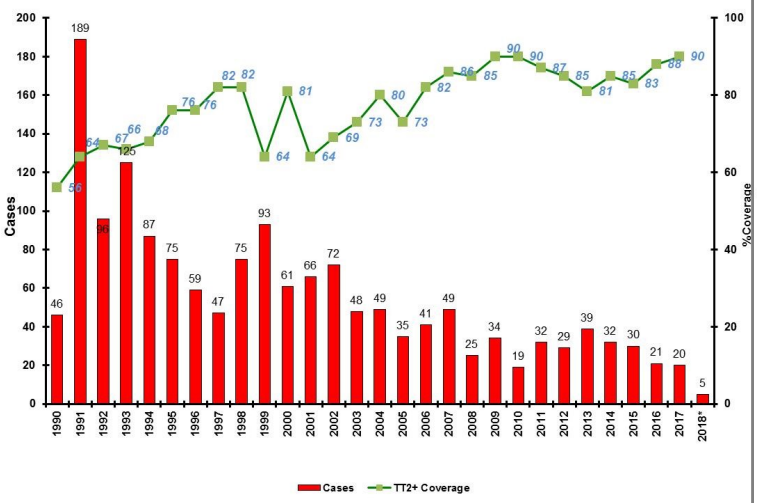
Neonatal Tetanus, 2018*

Reported NNT cases and deaths in State and Region

State/Region	Township	No. of cases	No. of deaths
Bago	Bago	1	1
Kachin	Waingmaw	1	0
Tanintharyi	Myeik	1	0
Yangon	Dagon Myothit (South)	1	1
Yangon	Hlaingtharya	1	1
Total reported		5	3

Place of birth among reported NNT cases		Reported NNT cases are delivered by		Vaccination status of mothers during pregnancy	
Hospital	0	Doctor	0	0 Dose	3
Health center	0	BHS	1		
Private hospital	0	Trained TBA	0	1 Dose	2
Home	5	TBA	2		
Other	0	Other	2	>=2 Doses	0
Unknown	0	Not Attended	0		
Total	5	Total	5	Total	5

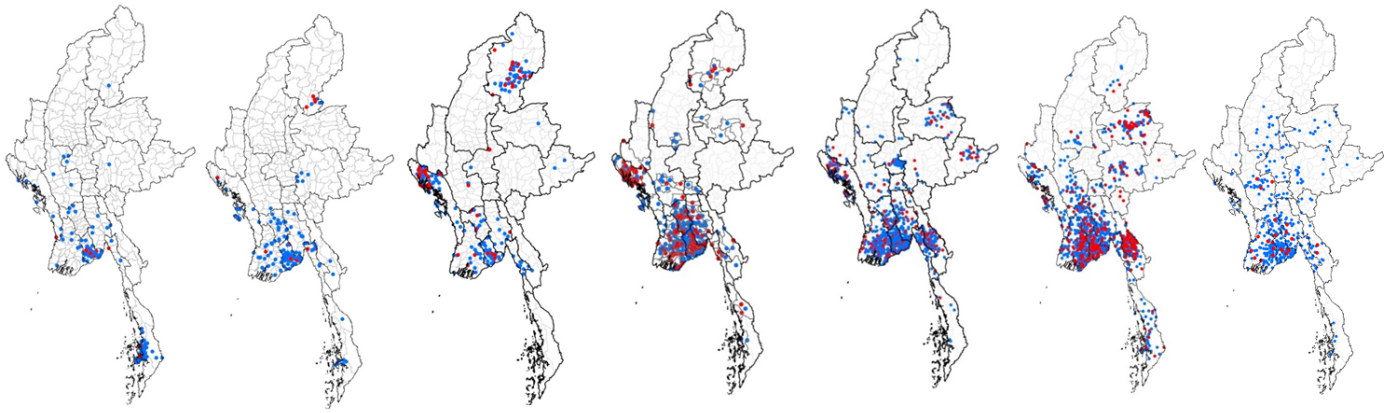
TT2 coverage and Neonatal tetanus cases (1990-2018*)



* Data as of week no. 22, 31 May 2018

Acute Encephalitis Syndrome

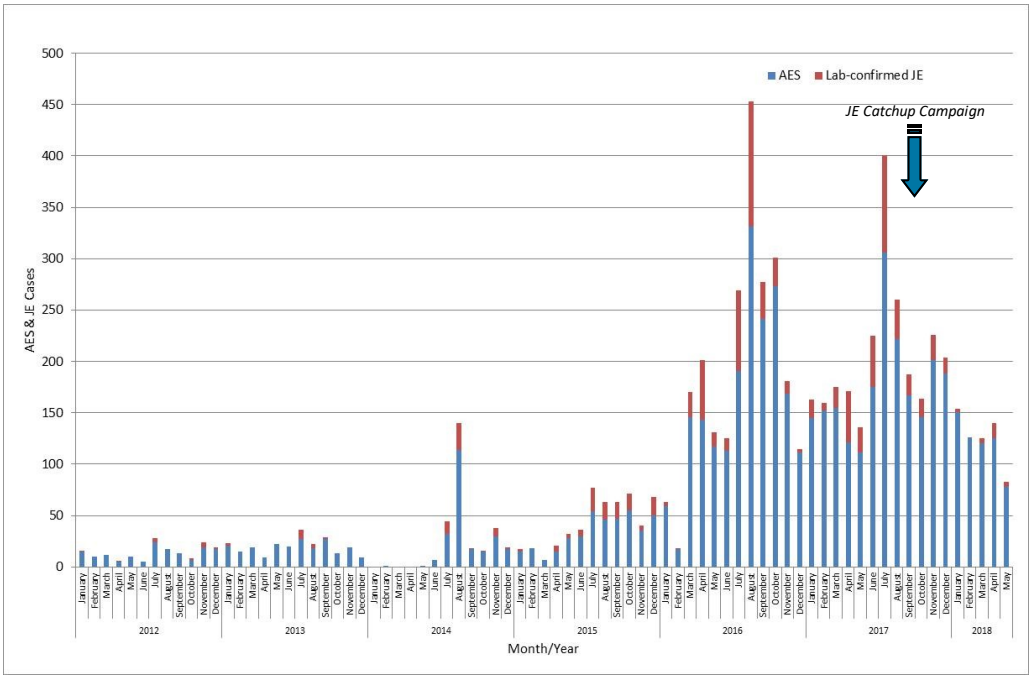
Reported AES cases & JE positive cases (2012-2018*), Myanmar



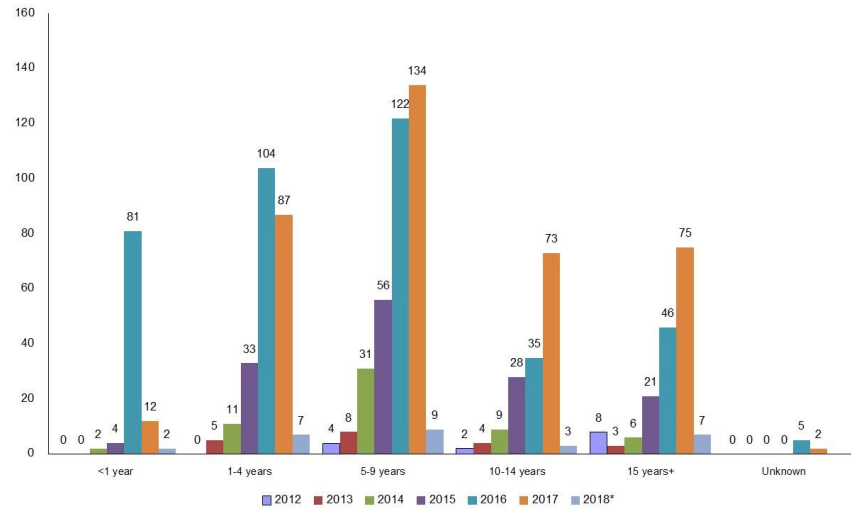
2012	2013	2014	2015	2016	2017	2018
JE 14	JE 17	JE 24	JE 151	JE 393	JE 383	JE 28
AES 176	AES 226	AES 152	AES 645	AES 1911	AES 2089	AES 600

1 Dot = 1 Case

JE incidence: lab confirmed and reported AES cases by months 2012-2018*



JE incidence: lab confirmed cases by age groups 2012-2018*



AES and JE Cases by State/Region 2018*

Region/State	AES	JE positive
Ayeyarwady	79	9
Bago	77	5
Chin	2	0
Kachin	0	0
Kayah	5	0
Kayin	11	2
Magway	28	3
Mandalay	21	0
Mon	19	0
Naypyitaw	8	0
Rakhine	11	0
Sagaing	15	0
Shan East	2	0
Shan North	14	0
Shan South	27	0
Tanintharyi	6	0
Yangon	272	9
Unknown SR	3	0
Grand Total	600	28

* Data as of week no. 22, 31 May 2018

Incidence of Vaccine preventable diseases (VPD)

	2013	2014	2015	2016	2017	2018*
Diphtheria	**38**	**29**	**87**	**136**	**68**	**40**
Measles	**1010**	**122**	**6**	**266**	**1293**	**120**
Pertussis	**14**	**5**	**5**	**2**	**4**	**12**
Polio*	**0**	**0**	**0**	**0**	**0**	**0**
Rubella	**23**	**30**	**34**	**10**	**6**	**3**
Neonatal tetanus	**39**	**32**	**30**	**21**	**20**	**5**
Japanese encephalitis	**3**	**50**	**113**	**393**	**442**	**28**

* Data as of week no. 22, 31 May 2018

Incidence of Vaccine preventable diseases (VPD) by State and Region, 2018*

State/Region	Diphtheria	Pertussis	Neonatal teta-nus	Japanese encephalitis
Ayeyarwady	4	0	0	9
Bago	3	2	1	5
Chin	0	0	0	0
Kachin	0	0	1	0
Kayah	0	0	0	0
Kayin	0	5	0	2
Magway	0	0	0	3
Mandalay	1	0	0	0
Mon	0	0	0	0
Nay Pyi Taw	0	0	0	0
Rakhine	2	0	0	0
Sagaing	0	0	0	0
Shan East	0	0	0	0
Shan North	1	0	0	0
Shan South	11	0	0	0
Tanintharyi	0	1	1	0
Yangon	18	4	2	9
National	40	12	5	28

* Data as of week no. 22, 31 May 2018

Myanmar influenza surveillance report

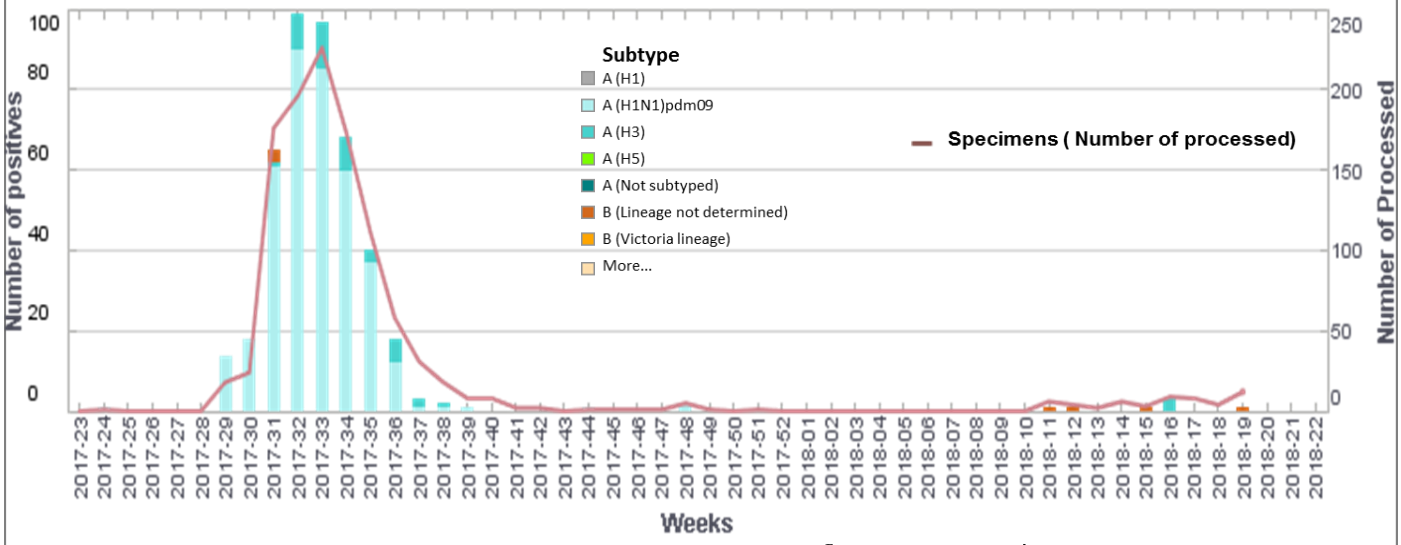
Influenza Data 2018*(Hospital Distribution)

Hospitals/ Senders		No. of Samples receipt	No. of Samples Positive	Type of Influenza
Yangon General Hospital	Influenza surveillance site	7	2	Flu B
NPT 1000 bedded Hospital	Influenza surveillance site	1	0	
Thingangyun Sanpya General Hospital	Influenza surveillance site	10	1	Flu B
Mandalay General Hospital	Influenza surveillance site	0		
Myitkyina General Hospital	Influenza surveillance site	18	0	
Sittwe General Hospital	Influenza surveillance site	0		
Myawaddy District Hospital	Influenza surveillance site	6	0	
Muse Township Hospital	Influenza surveillance site	7	1	Flu B
North Okkalapa General Hospital	-	1	0	
DoPH, Taunggyi	-	5	3	A/H3

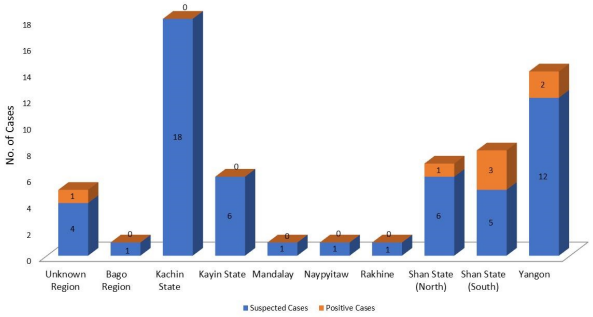
ILI/SARI sentinel surveillance sites

- Naypyidaw 1000 bedded hospital
- Yangon general hospital
- Yangon Thingyangyun hospital
- Mandalay general hospital
- Myitkyina general hospital
- Sittwe general hospital
- Myawaddy township hospital
- Muse township hospital

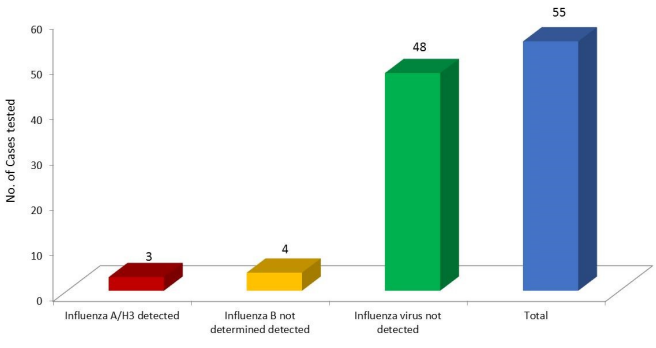
Number of specimens positive for influenza by subtype as of week no, 22



Case distribution by State/Region, 2018*



Influenza Data, 2018*



DISEASE OUTBREAK 2018*

No	Diseases	Frequency	Cases	Death
1	Measles	51	204	0
2	Diphtheria	28	40	7
3	Food poisoning	17	713	0
4	Diarrhoea	8	339	9
5	Meningitis	5	5	2
6	Chickenpox	4	22	0
7	Anthrax	3	19	0

* Data as of week no. 22, 31 May 2018

AFP Case Definition:

Any case of AFP in a child aged <15 years, or any case of paralytic illness in a person of any age when polio is suspected.

Acute: rapid progression of paralysis from onset to maximum paralysis

Flaccid: loss of muscle tone, "floppy" – as opposed to spastic or rigid

Measles Case Definition:

Suspected case of measles:

A patient in whom a health- care worker suspects measles infection, **OR** a patient with fever and maculo-papular (non-vesicular) rash.

Laboratory confirmed measles: A suspected case of measles, that has been confirmed by a proficient laboratory

Epidemiologically linked confirmed case of measles: A suspected case of measles, that has not been confirmed by a laboratory but was geographically and temporally related, with dates of rash onset occurring 7 - 21 days apart to a laboratory confirmed case, or, in the event of a chain of transmission to another epidemiologically confirmed measles case.

CRS Surveillance
Congenital Rubella Syndrome (CRS) Standard Case Definitions

Classification of cases for CRS surveillance purposes is based on clinical, epidemiological and laboratory data. The case definitions for CRS surveillance in-

Case definition for Diphtheria surveillance

Clinical description

Whooping Cough Case Definitions

Clinical case definition

In the absence of a more likely diagnosis a cough illness lasting ≥2 weeks with one of the following symptoms: Paroxysms of coughing, OR Inspiratory

Confirmed Case definition of Neonatal Tetanus:

Any neonate with normal ability to suck and cry during first two days and who during 3 to 28 days cannot suck or cry and has convulsion or spasms, by triggered by minimal stimuli such as light, noise or touch or who has signs of stiffness and rigidity, which include any of the following: trismus, clenched fists

Surveillance of AES

All cases of acute encephalitis syndrome should be reported

Clinical case definition: A person of any age, in any geographical region, at any time of year with acute onset of fever and a change in

AFP Surveillance Indicators (core indicators)

Indicator	Target	Calculation
1. Non-polio AFP rate	= 2/100,000	No. of discarded non-polio AFP cases among 15 years of age group / Total number of children < 15 years of age x 100000
2. Reported AFP cases with 2 specimens collected = 14 days since onset.	= 80%)	No of AFP cases with 2 specimens collected within 14 days of paralysis onset / Total number of children < 15 years of age x 100

Measles Surveillance Indicators (core indicators)

Indicator	Target	Definition
Disease incidence Annual incidence of confirmed measles cases Annual incidence of confirmed rubella cases	Absence of indigenous measles transmission	The numerator is the confirmed number of measles or rubella cases of the year denominator is the population in which the cases occurred multiplied by 1,000,000. When numerator is zero, the target incidence would be zero.
Proportion of sub-national administrative units reporting at least 2 discarded non measles, non rubella cases per 100,000 population	>80%	The numerator is the number of sub-national units reporting at least 2 discarded non-measles non rubella cases per 100,000 and the denominator is the total number of sub-national units multiplied by 100

Data source:

- Central Epidemiology Unit,
- National Health Laboratory,
- National Surveillance Coordinator Office (WHO)

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