

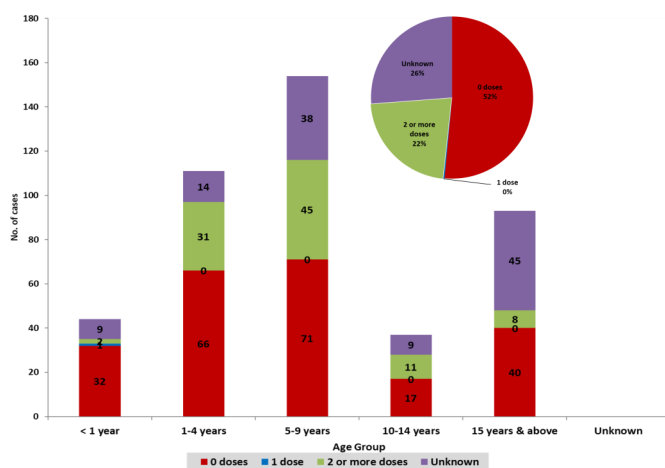


**Fever with Rash Surveillance, 2020\***

State/Region	Total Population	Expected Non-measles suspected measles Cases	Suspected cases reported	Confirmed Measles			Confirmed Rubella	Non Measles Non Rubella Cases	Pending	Annualized incidence of measles	Annualized incidence of non-measles/non-rubella suspected measles cases
				Lab-confirmed	Epi-confirmed	Clinically confirmed					
Ayeyarwady	6450505	129	55	19	4	1	1	30	0	3.72	0.47
Bago	5292074	106	53	17	10	1		25	0	5.29	0.47
Chin	553704	11	3	0	0	2	0	1	0	3.61	0.18
Kachin	1742095	35	6	4	0	0	0	1	1	2.30	0.06
Kayah	326027	7	6	3	0	0	0	3	0	9.20	0.92
Kayin	1770549	35	21	4	14	0	0	3	0	10.17	0.17
Magway	4417875	88	10	5	0	0	0	4	1	1.13	0.09
Mandalay	6399793	128	61	30	20	8	0	3	0	9.06	0.05
Mon	2377706	48	28	7	8	2	0	11	0	7.15	0.46
Nay Pyi Taw	1150500	23	9	4	1	0	0	4	0	4.35	0.35
Rakhine	3033837	61	194	57	115	5	0	17	0	58.34	0.56
Sagaing	5839197	117	13	7	4	1	0	1	0	2.06	0.02
Shan East	741673	15	4	2	0	0	0	0	2	2.70	0.00
Shan North	2505404	50	7	5	0	0	1	1	0	2.00	0.04
Shan South	2487728	50	8	3	0	0	0	5	0	1.21	0.20
Tanintharyi	1603617	32	72	28	40	1	0	3	0	43.03	0.19
Yangon	7350974	147	87	7	0	0	0	80	0	0.95	1.09
<b>National</b>	<b>54043258</b>	<b>1081</b>	<b>637</b>	<b>202</b>	<b>216</b>	<b>21</b>	<b>2</b>	<b>192</b>	<b>4</b>	<b>8.12</b>	<b>0.36</b>

**Total suspected outbreaks— 15 Confirmed measles outbreaks— 15 Non Measles/Rubella outbreaks— 0 Pending— 0**

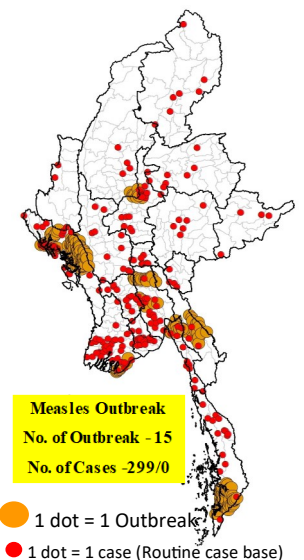
**Age and vaccination Status of confirmed measles cases, 2020\*(n=439)**



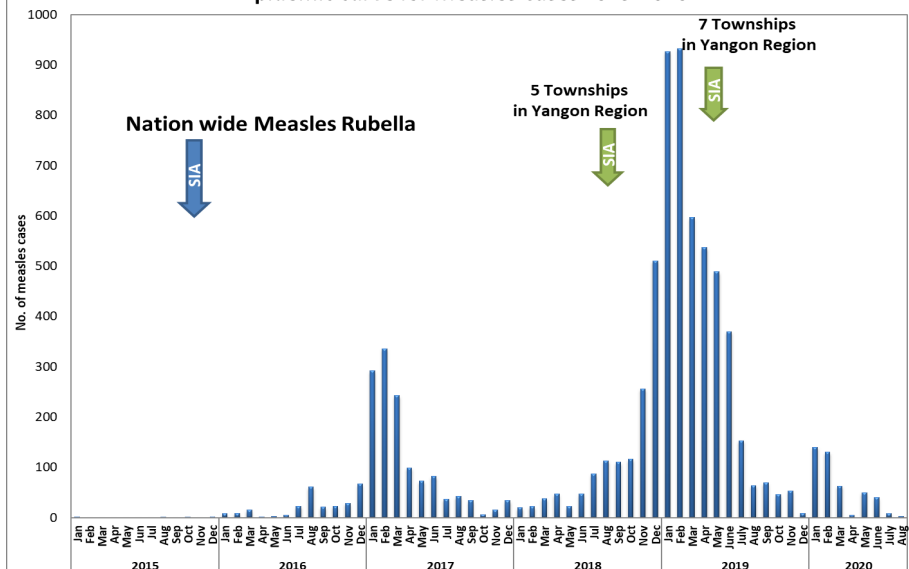
**Occurrence of measles outbreak**

Region	Township
Ayeyarwady	Pyapon
Bago (East)	Kyauktaga
	Taungoo
Mon	Bilin
Kayin	Hlaingbwe
Mandalay	Pyigy tagon
	Mahaaungmyay
	Ann
Rakhine	Myauk Oo
	Pauktaw
	Sittwe
Sagaing	Sagaing
Tanintharyi	Bokepyin

**Sport map of measles cases 2020\***



**Epidemic curve for Measles Cases 2015-2020\***



**CRS Surveillance, 2020\***

Total no. of serum sample received - None

Total no. of serum sample tested - None

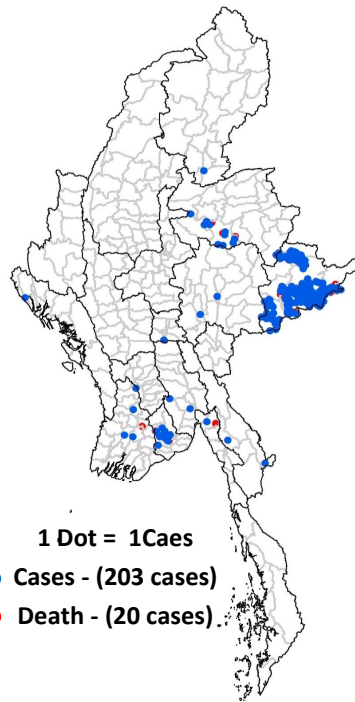
Data source: routine case based surveillance and outbreaks

\* Data as of week no.36 , 31/8/2020

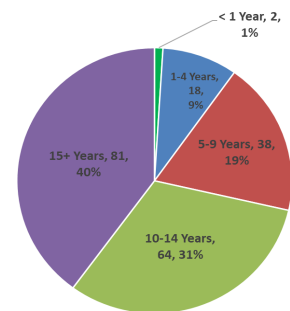
## Diphtheria, 2020\*

Reported suspected diphtheria cases and deaths in states and regions

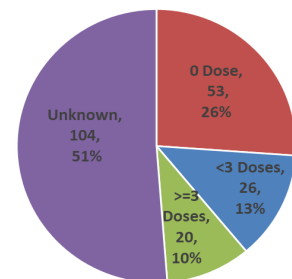
State/Region	Total no. of cases	Total no. of death
Ayeyarwady	3	1
Bago	2	0
Chin	0	0
Kachin	1	0
Kayah	0	0
Kayin	2	0
Magway	0	0
Mandalay	0	0
Mon	1	1
Nay Pyi Taw	1	0
Rakhine	1	0
Sagaing	0	0
Shan East	167	10
Shan North	10	3
Shan South	3	0
Tanintharyi	0	0
Yangon	12	5
<b>Grand Total</b>	<b>203</b>	<b>20</b>



Suspected diphtheria cases by age group



Immunization status of suspected diphtheria cases



## Pertussis (Whooping Cough), 2020\*

Reported pertussis cases and deaths in states and regions

State/Region	Cases	Deaths
Ayeyarwady	3	0
Magway	1	0
Naypyitaw	2	0
Tanintharyi	4	0
Yangon	3	0

Age distribution and vaccination status of

Age group	0 Dose	<3 Doses	>=3 Doses	Total
0-11 Months	6	2	0	8
1-4 Years	1	0	0	1
5-9 Years	1	0	0	1
10-14 Years	0	0	0	0
15+ Years	3	0	0	3
<b>Grand Total</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>13</b>

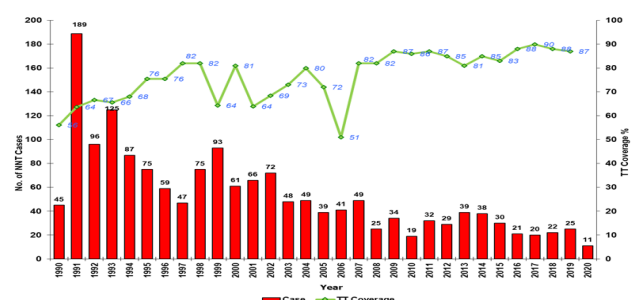
## Neonatal Tetanus, 2020\*

Reported NNT cases and deaths in states and regions

State/Region	Cases	Deaths
Bago (East)	1	1
Kachin	1	1
kayin	1	1
Rakhine	1	0
Shan (East)	2	2
Shan (North)	3	2
Tanintharyi	1	0
<b>Total Reported</b>	<b>11</b>	<b>8</b>

Place of birth among reported NNT cases	Reported NNT cases are delivered by	Vaccination status of mother during pregnancy
Hospital	0	0
Health Center	0	0
Private Hospital	0	2
Home	10	5
Other	1	1
Unknown	0	0
<b>Total</b>	<b>11</b>	<b>11</b>

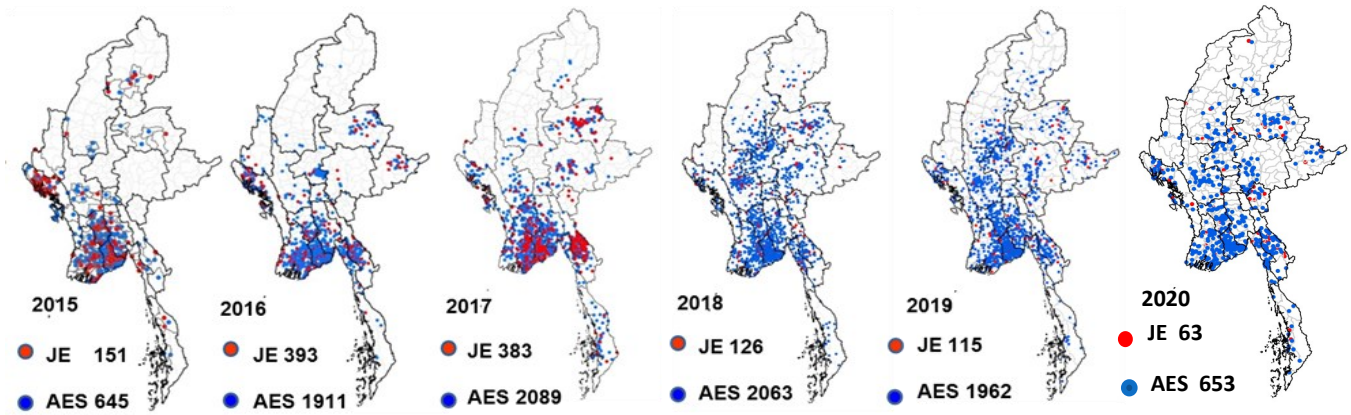
TT2 coverage and neonatal tetanus cases (1990-2020\*)



\* Data as of week no.36, 31 /8/ 2020

**Acute Encephalitis Syndrome (AES)**

**Reported AES cases & Japanese Encephalitis (JE) positive cases (2015-2020\*), Myanmar**

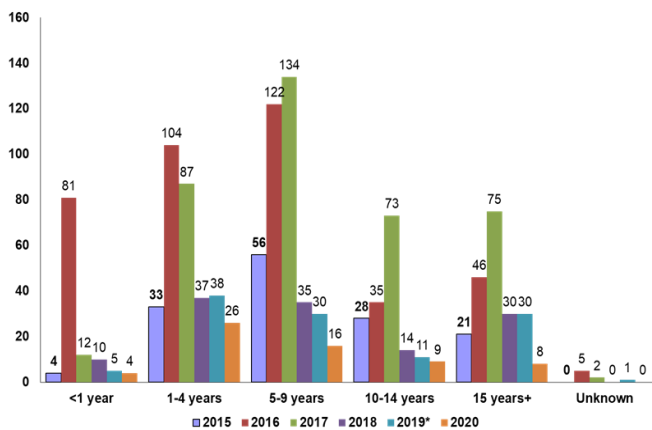


1 Dot = 1 Case

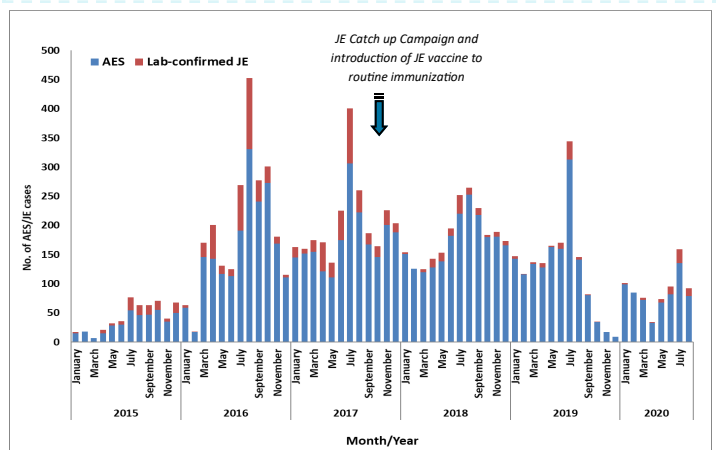
**Region/State-wise occurrences of JE 2015-2020\***

Region/State	2015		2016		2017		2018		2019		2020	
	AES	JE Positive	AES	JE Positive	AES	JE Positive	AES	JE Positive	AES	JE Positive	AES	JE Positive
Ayeyawady	90	21	231	45	259	51	185	15	151	12	69	5
Bogo	86	28	213	53	256	49	200	11	203	11	56	3
Chin	1	1	11	3	2	1	4	1	1	0	4	0
Kachin	12	5	8	1	7	2	14	3	18	0	10	1
Kayah	0	0	1	1	15	6	15	3	19	2	10	5
Kayin	6	1	136	37	165	65	63	10	75	11	43	9
Magway	10	4	30	4	58	6	122	17	128	1	34	1
Mandalay	2	0	122	19	6	1	155	2	102	7	29	4
Mon	29	5	60	8	61	13	50	4	42	5	27	2
Naypyitaw	1	0	5	2	12	1	15	1	9	0	4	0
Rakhine	126	46	120	26	88	17	60	4	68	7	37	10
Sagaing	6	1	52	9	18	2	83	5	65	5	19	4
Shan East	1	0	29	8	5	2	6	2	26	8	11	4
Shan North	4	0	90	16	88	42	83	19	37	7	29	7
Shan South	0	0	14	2	60	16	82	5	62	6	29	2
Tanintharyi	6	3	18	4	45	11	19	0	13	0	13	2
Yangon	265	36	771	155	889	92	881	24	887	31	216	4
Hospital	0	0	0	0	55	6	26	0	56	2	13	0
<b>Total</b>	<b>645</b>	<b>151</b>	<b>1911</b>	<b>393</b>	<b>2089</b>	<b>383</b>	<b>2063</b>	<b>126</b>	<b>1962</b>	<b>115</b>	<b>653</b>	<b>63</b>

**JE incidence: lab confirmed cases by age groups 2015-2020\***



**Lab confirmed and reported AES cases by months 2015-2020\***



\* Data as of week no.36, 31/8/2020

## Vaccine preventable disease cases (VPD) 2015-2020\*

	2015	2016	2017	2018	2019	2020*
Diphtheria	87	136	68	127	118	203
Measles	6	269	1293	1389	4247	439
Pertussis	5	2	4	28	30	13
Polio	0	0	0	0	6 (cVDPV)	0
Rubella	34	10	6	13	24	2
Neonatal tetanus	30	21	20	22	25	11
Japanese encephalitis	151	393	383	126	115	63

\* Data as of week no.36 , 31 /8/2020

## Vaccine preventable disease cases (VPD) by state and region, 2020\*

State/Region	Diphtheria	Pertussis	Neonatal tetanus	Japanese encephalitis
Ayeyarwady	3	3	0	5
Bago	2	0	1	3
Chin	0	0	0	0
Kachin	1	0	1	1
Kayah	0	0	0	5
Kayin	2	0	1	9
Magway	0	1	0	1
Mandalay	0	0	0	4
Mon	1	0	0	2
Nay Pyi Taw	1	2	0	0
Rakhine	1	0	1	10
Sagaing	0	0	0	4
Shan East	167	0	2	4
Shan North	10	0	4	7
Shan South	3	0	0	2
Tanintharyi	0	4	1	2
Yangon	12	3	0	4
Hospital	0	0	0	0
<b>National</b>	<b>203</b>	<b>13</b>	<b>11</b>	<b>63</b>

\* Data as of week no.36 , 31/8/2020

## DISEASE OUTBREAK 2020\*

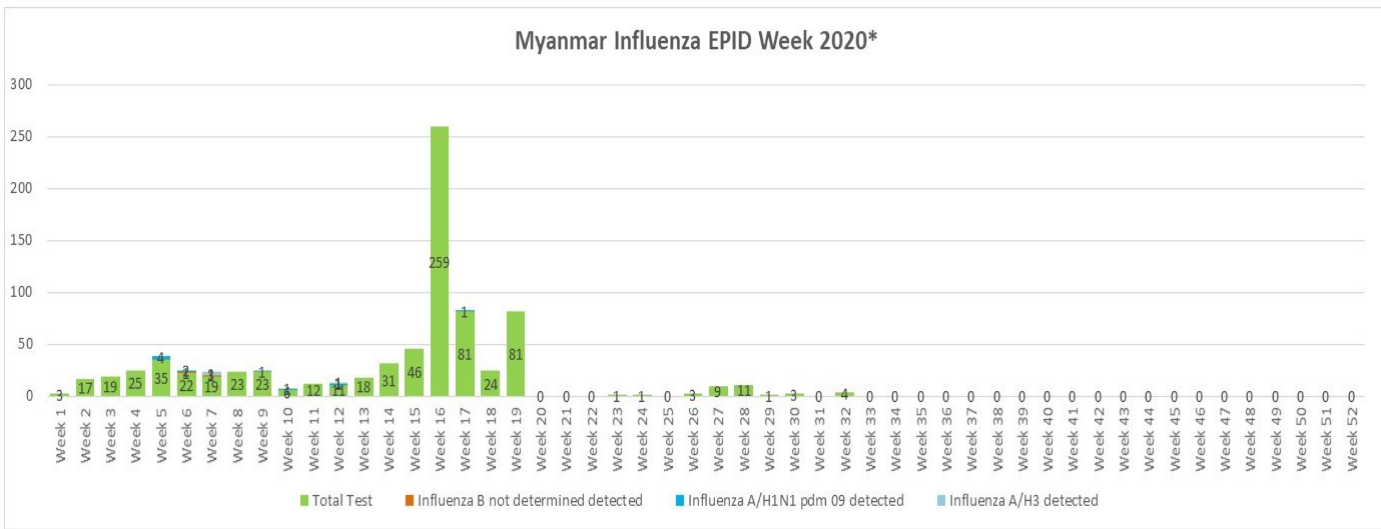
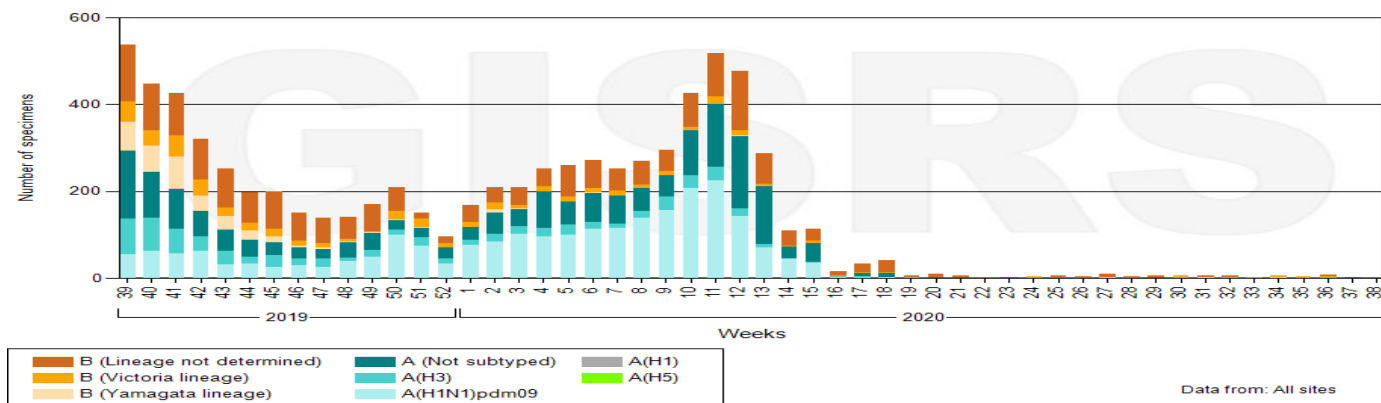
No.	Disease	Jan-June			August		
		Events	Cases	Deaths	Events	Cases	Deaths
1.	Anthrax	1	1	0	0	0	0
2.	Chicken pox	4	36	0	0	0	0
3.	Diarrhoea	6	177	5	0	0	0
4.	Diphtheria	38	38	12	165	165	8
5.	Food Poisoning	20	700	3	5	136	0
6.	Measles	15	307	0	0	0	0
7.	Meningitis	7	7	0	0	0	0
8.	Mumps	0	0	0	0	0	0

\* Data as of week no.36 , 31/8/ 2020

# Influenza surveillance report

Number of specimens positive for influenza by Southern Hemisphere subtype

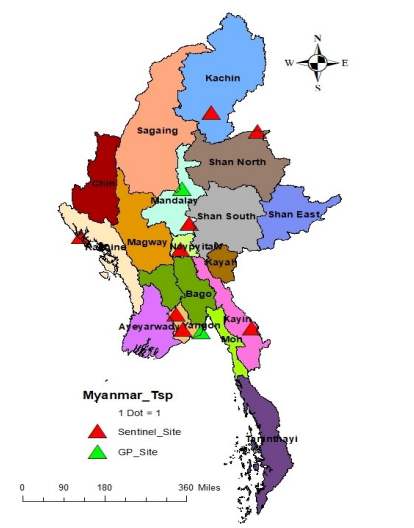
**Number of specimens positive for influenza by subtype**



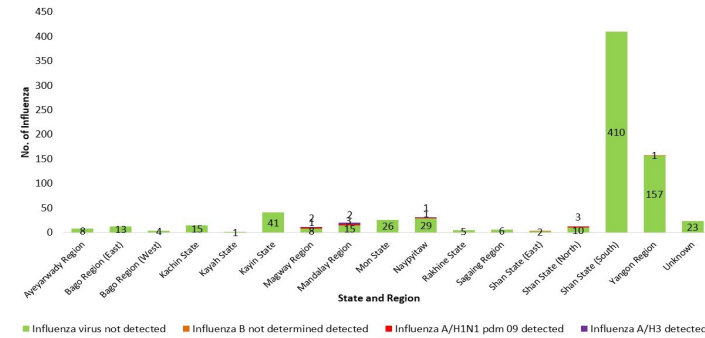
**Myanmar Influenza surveillance in August-2020\* (Hospital Distribution)**

Name of Hospital	A/H1N1 pdm 09 detected	Influenza A/H3 detected	B not determined detected	virus not detected	Total
<b>Sentinel Hospital</b>					
1000 Bedded General Hospital, Nay Pyi Taw	1	2	0	48	51
Mandalay General Hospital	0	0	0	7	7
Muse Township Hospital	4	0	0	7	11
Myawaddy District Hospital	0	0	0	41	41
Myit Kyi Na General Hospital	0	0	0	15	15
Sittwe General Hospital	0	0	0	0	0
Thingangyun Sanpya General Hospital (T.G.H)	0	0	0	116	116
Yangon General Hospital (Y.G.H)	0	0	0	11	11
GP-Mandalay	0	0	0	1	1
GP-Yangon	0	0	0	15	15
<b>Other Hospital/Source</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>512</b>	<b>520</b>
<b>Total</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>773</b>	<b>788</b>

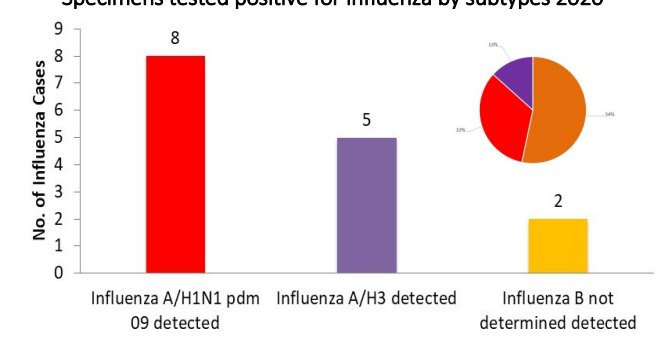
ILI/SARI sentinel surveillance sites and GP sites



**Case distribution by State/Region, 2020\***



**Specimens tested positive for influenza by subtypes 2020\***

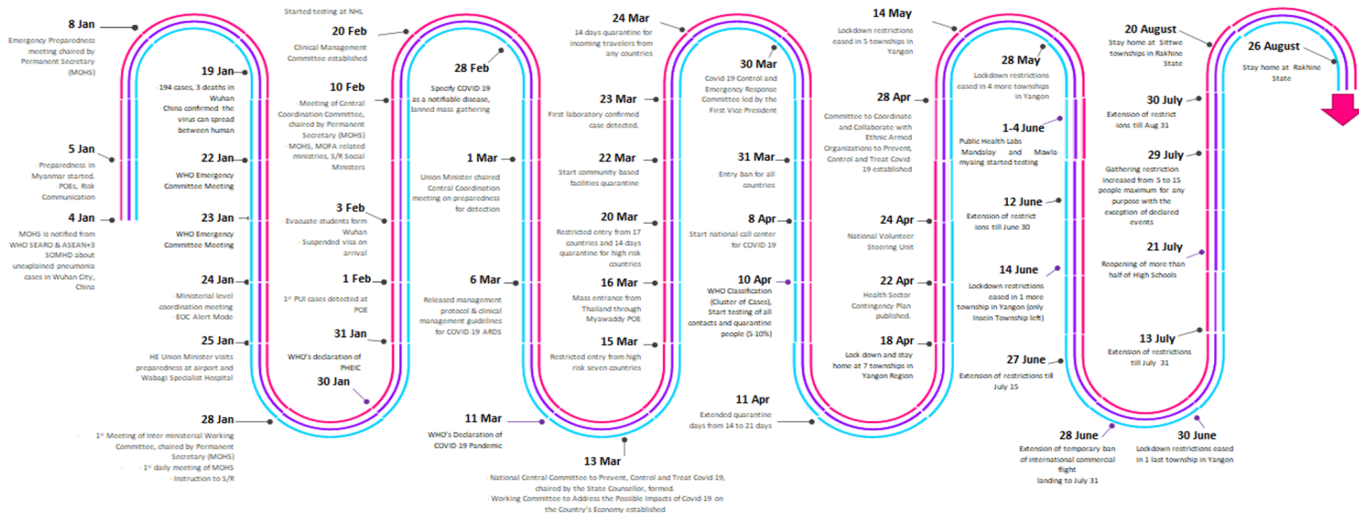


\* Data as of week no. 36, 31 /8/2020

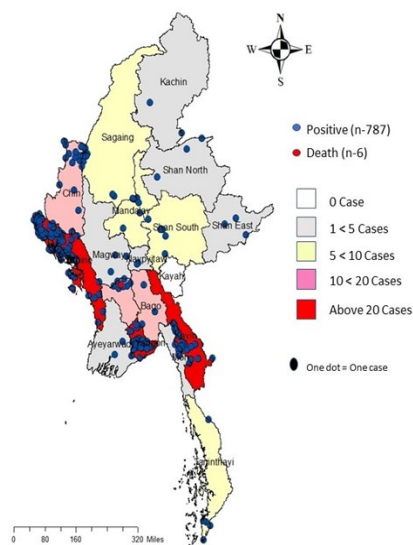
## Coronavirus Disease 2019 (COVID-19) in Myanmar



### Timeline of Preparedness and Response to COVID-19 in Myanmar (as of 31.8.2020)



Map showing COVID-19 laboratory confirmed cases



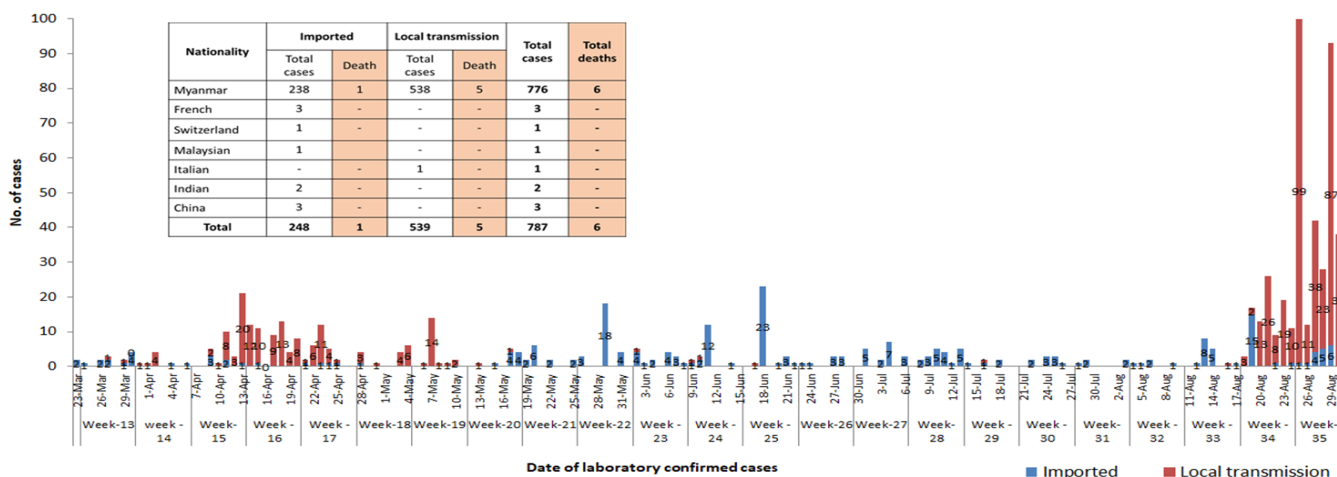
COVID-19 positive confirmed cases by State/region (31-8-2020)

No	State/Region	COVID-19 Confirmed case	Recovered	Deaths
1	Rakhine	361 (32 New)	16	-
2	Yanogn	326 (6 New)	252(2 New)	5
3	Kayin	29	29	-
4	Chin	18	13	-
5	Bago	10	8	1
6	Sagaing	9	9	-
7	Mandalay	6	4	-
8	Shan (South)	5	4	-
9	Thanintharyi	5	2	-
10	Shan (East)	3	3	-
11	Shan (North)	3	3	-
12	Magway	3	3	-
13	Mon	3	2	-
14	Ayeyarwaddy	2	2	-
15	Kachin	2	2	-
16	Naypyitaw	2	2	-
17	Kayah	-	-	-
<b>Total</b>		<b>787 (38 New)</b>	<b>354(2 New)</b>	<b>6</b>

No. of Facility Quarantine sites and Quarantined people on 31.8.2020

No.	State/Region	No. of facilities	Total no. of quarantine
1	Yangon	75	4962
2	Mon	254	2627
3	Rakhine	403	2395
4	Bago	190	2220
5	Kayin	387	1962
6	Tanintharyi	189	1791
7	Magway	48	1316
8	Mandalay	87	1076
9	Sagaing	167	921
10	Ayeyarwaddy	86	622
11	Kachin	86	503
12	Shan South	78	434
13	Naypyitaw	5	387
14	Chin	19	102
15	Shan North	270	81
16	Kayah	18	51
17	Shan East	7	34
<b>Total</b>		<b>2,369</b>	<b>21,484</b>

COVID-19 confirmed cases by types of transmissions (as of 31.8.2020) n=787



**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

Paralysis: weakness, loss of voluntary movement

Any case meeting this definition undergoes a thorough investigation to determine if the paralysis is caused by polio.

**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.

**Clinically compatible measles case:** A case with fever and maculo-papular (non-vesicular) rash and one of cough, coryza or conjunctivitis for which no adequate clinical specimen was taken and which has not been linked epidemiologically to a laboratory confirmed case of measles or another laboratory-confirmed communicable diseases.

**Congenital Rubella Syndrome CRS Surveillance**

**Standard Case Definitions**

Classification of cases for CRS surveillance purposes is based on clinical, epidemiological and laboratory data. The case definitions for CRS surveillance include the following categories: suspected, laboratory confirmed, clinically compatible, epidemiologically linked and discarded.

**Case definition for Diphtheria surveillance**

Clinical description

An upper respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose.

Laboratory criteria: Isolation of *C. diphtheriae* from a clinical specimen, OR Histopathologic diagnosis of diphtheria.

**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 “whoop,” OR Post tussive vomiting, OR Apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)

**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 or fits, continuously pursed lips, curved back (opisthotonus).

**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 mental status (including symptoms such as confusion, disorientation, coma, or inability to talk) AND/OR new onset of seizures (excluding simple febrile seizures).

**AFP Surveillance Indicators (core indicators)**

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

**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)

*CEU produced this bulletin with the support of EPI Unit, WHO Country Office Myanmar*