



# WEEKLY EPIDEMIOLOGICAL REPORT

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## Control and prevention of Chickenpox (Varicella) Outbreaks

### Background

Chickenpox is a very contagious disease that results from primary infection with the varicella-zoster virus (VZV). It transmits from person to person by direct contact with patients with either varicella or herpes zoster (HZ) or by airborne spread (from respiratory secretions or aerosolized vesicular fluid from skin lesions). The average incubation period is 14–16 days (range, 10–21 days) and persons with varicella are considered infectious from 1 to 2 days before the rash appears until all lesions are crusted over (average range, 4–7 days after rash onset).

The virus is not eliminated from the body, once an episode of chickenpox has resolved in some patients and the virus remains latent in the nerve cells without causing symptoms. These patients can develop herpes zoster, many years after the initial infection.

### Signs & Symptoms

A rash which becomes itchy, fluid-filled blisters that eventually turn into scabs is the hallmark of the disease. The rash initially appears on the face, chest and back which then spread to the rest of the body including mucous membranes. It will take nearly one week for all the blisters to become scabs. High fever, tiredness, loss of appetite and headache may also appear 1-2 days before the rash appears.

### Transmission

Chickenpox is a very contagious disease where the virus spreads easily from an infected person to a non-immune individual (who has never had the disease or vaccination) via respiratory droplets. The virus

can even spread by touching or breathing in the virus particles that come from chickenpox blisters. Once the person develops scabs, he is no longer contagious. Herpes zoster or the shingles cannot be passed from one person to another. However, the VZV can spread from a person with active shingles to another non-immune person through direct contact with fluid from the blisters caused by shingles. In such cases, the exposed person might develop chickenpox. Shingles are less contagious than chickenpox and the risk of a person with shingles spreading the virus is further reduced if the rash is covered. A person with chickenpox can spread the disease from 1 to 2 days before they get the rash until all their chickenpox blisters have formed scabs. The incubation period is from 10 to 21 days after exposure to a person with chickenpox or shingles for someone to develop chickenpox. For most people, getting chickenpox once provides immunity for life. However, for a few people, they can get chickenpox more than once, although this is not common.

### Complications of the Disease

Complications from chickenpox are rare except for people who are at extremes of age such as infants and elderly, pregnant women and people with weakened immune systems due to either illness or medications and any person who acquires chickenpox as an adult as well. Such complications are; pneumonia especially in adults, secondary skin sepsis, septicaemia and encephalitis leading sometimes to persistent sequelae and death. A secondary bacterial infection can result in a disfiguring scar. Possible complications in pregnancy include premature birth and congenital varicella syndrome.

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## Treatment

Chickenpox infection usually resolves without any treatment. However, when there are complications medical advice is needed and treated with antiviral drugs or with Varicella zoster specific immunoglobulins depending on the patient factors. Acyclovir is an antiviral medication which is licensed for treatment of chickenpox and the recommended dosage is as follows: For an adult by mouth, 800 mg 4–5 times daily for 5–7 days; For a child under 2 years 200 mg 4 times daily, 2–5 years 400 mg 4 times daily and over 6 years 800 mg 4 times daily. For treatment of herpes zoster, for adult by mouth, 800 mg 5 times daily for 7–10 days. Other antiviral medications such as valacyclovir and famciclovir have also shown to be effective against chickenpox.

In addition, there are several things that can be done at home to help relieve chickenpox symptoms. By keeping fingernails of patients short to avoid scratching of blisters which can lead to cause infection. Calamine lotion may help relieve itching to some extent. Aspirin or aspirin-containing products should not be taken to relieve fever. Use of aspirin in children with chickenpox has been associated with the development of Reye's syndrome. Non-aspirin medications such as acetaminophen may be used.

The natural infection will induce lifelong immunity to clinical varicella in most of the immunocompetent persons. The newborn babies of immune mothers are protected by passively transmitted antibodies during their first few months of life.

## Varicella Vaccine

The Varicella Vaccine is a live attenuated vaccine developed in Japan in the 1970's and is licensed for use in the United States since 1995. The vaccine is effective and safe and results in substantial declines in morbidity and mortality in countries that have introduced vaccination. Two doses, given four to eight weeks apart, are recommended for adolescents and adults, in whom 78% were found to have seroconverted after the first dose, and 99% after the second dose of the vaccine.

## Control and prevention

It is very difficult to prevent outbreaks once a single case has occurred in a susceptible population. Wherever possible, the person with the disease should avoid contact with anyone who has never had it. That also indicates not spending much time in a room with other people because chickenpox can also be spread through the air. The closure of institutions due to chickenpox is not routinely recommended.

When considering prevention, the best way to prevent chickenpox is the vaccination. The chickenpox vaccine is very safe and effective at preventing the disease. Most people who get the vaccine will not get chickenpox. If a vaccinated person does get chickenpox, it is usually a mild disease with fewer blisters and low grade or no fever. The chickenpox vaccine prevents almost all cases of severe disease.

Use of anti-herpes medicines during early incubation period to prevent Chickenpox is still a debatable question. But there are publications to indicate that use of Acyclovir is effective in the prevention or reducing the severity of the symptoms and duration of symptoms if administered during the early incubation period.

Isolation and quarantine of cases and contacts could be done until the vesicles become dry and crusted. Patients should not go to school, work and avoid any other public place till the blisters are dry and crusted. Contacts should be quarantined for a period of 2 weeks.

All cases of chickenpox need to be investigated by the MOH and his team with special attention with the isolation of contacts and quarantine where necessary.

## References :

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 03<sup>rd</sup> - 09<sup>th</sup> Mar 2018 (10<sup>th</sup> Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	102	2022	2	14	1	3	1	12	0	5	3	36	0	2	0	2	0	0	0	19	150	2	14	0	1	59	100
Gampaha	60	1240	1	9	2	3	0	8	0	7	11	52	0	1	0	2	0	0	0	8	179	3	11	0	2	74	100
Kalutara	70	901	1	12	0	2	1	1	0	16	8	73	0	2	0	4	0	0	0	11	128	0	19	0	1	53	100
Kandy	29	816	0	12	0	3	0	1	0	2	3	11	4	25	0	4	0	0	0	10	63	0	6	0	5	57	100
Matale	13	234	0	3	0	1	0	0	1	6	1	10	0	1	0	1	0	0	0	0	8	0	3	5	25	63	100
Nuwareliya	2	44	0	2	1	1	0	4	0	2	1	4	5	30	2	6	0	0	0	10	68	1	9	0	0	22	100
Galle	2	118	0	3	0	3	0	0	0	1	1	38	0	7	0	0	0	0	1	0	11	2	8	0	1	40	35
Hambantota	26	300	1	3	0	0	0	1	0	0	0	9	1	17	0	0	0	0	0	11	65	0	1	3	128	72	100
Matarra	18	297	0	6	1	3	0	2	0	13	4	39	0	9	0	1	0	0	0	6	74	0	2	3	77	56	100
Jaffna	47	1038	3	33	0	0	0	14	0	12	0	4	10	174	0	0	0	0	0	11	77	0	5	0	0	34	93
Kilinochchi	9	83	0	5	0	0	0	8	0	0	0	1	0	2	0	0	0	0	1	12	15	0	0	0	0	45	100
Mannar	0	18	0	9	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	10	0	1	0	0	26	100
Vavuniya	11	139	0	2	0	1	5	17	0	6	1	11	0	6	0	0	0	0	1	0	10	0	1	0	0	50	100
Mullaitivu	0	19	1	2	0	0	1	4	0	5	1	4	0	2	0	0	0	0	0	1	1	0	0	0	0	19	84
Batticaloa	111	1314	5	45	0	4	0	0	0	7	1	8	0	1	0	1	0	1	0	3	25	0	7	0	0	64	100
Ampara	1	40	1	9	0	0	0	0	0	0	0	14	0	0	0	3	0	0	0	17	52	0	3	0	0	61	100
Trincomalee	16	221	2	15	0	0	0	1	1	6	2	11	0	9	1	1	0	0	0	8	60	0	1	1	6	34	100
Kurunegala	41	897	2	30	0	2	0	4	0	2	2	32	0	6	0	2	0	0	1	15	123	1	19	2	48	69	100
Puttalam	23	870	1	12	0	2	1	3	1	2	1	10	0	4	0	0	0	0	0	1	25	0	16	0	0	75	100
Anuradhapura	21	264	1	13	0	1	0	1	0	0	2	43	0	11	0	0	0	0	0	16	86	1	5	6	73	45	100
Polonnaruwa	4	72	0	9	0	1	0	0	0	6	1	42	0	0	0	1	0	0	0	2	46	0	4	6	41	67	94
Badulla	3	124	2	33	0	0	0	5	0	5	6	32	3	15	2	6	0	0	0	14	98	4	22	0	2	53	99
Monaragala	18	350	0	26	0	2	0	1	0	2	1	78	3	38	0	4	0	0	0	5	42	0	5	0	8	55	100
Ratnapura	33	433	5	43	1	18	0	4	0	2	12	68	3	10	0	4	0	1	8	77	4	29	15	87	41	100	
Kegalle	29	339	0	13	0	4	0	2	4	40	4	24	2	19	0	6	0	0	11	80	3	8	0	0	67	100	
Kalmune	30	864	3	14	0	0	0	1	0	13	0	1	0	0	0	1	0	0	2	27	1	3	0	1	46	100	
<b>SRILANKA</b>	<b>719</b>	<b>13057</b>	<b>31</b>	<b>377</b>	<b>6</b>	<b>54</b>	<b>9</b>	<b>96</b>	<b>7</b>	<b>160</b>	<b>66</b>	<b>656</b>	<b>31</b>	<b>391</b>	<b>5</b>	<b>49</b>	<b>0</b>	<b>6</b>	<b>201</b>	<b>1600</b>	<b>22</b>	<b>202</b>	<b>41</b>	<b>506</b>	<b>55</b>	<b>95</b>	

Source: Weekly Returns of Communicable Diseases (WRCD).  
 \*T=Timeliness refers to returns received on or before 09<sup>th</sup> March, 2018 Total number of reporting units 349 Number of reporting units data provided for the current week: 331 C\*\*=Completeness  
 A = Cases reported during the current week. B = Cumulative cases for the year.

**Table 2: Vaccine-Preventable Diseases & AFP**

**03<sup>rd</sup> – 09<sup>th</sup> Mar 2018 (10<sup>th</sup> Week)**

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	01	00	00	00	01	03	11	22	- 50 %
Diphtheria	00	00	00	00	00	00	00	00	00	02	00	00	00	0 %
Mumps	02	02	02	01	00	01	01	01	00	10	05	59	59	0 %
Measles	01	00	00	00	01	00	01	01	00	02	07	21	73	- 71.2 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	04	04	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	01	06	05	20 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	11	20	- 45 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	07	04	75 %
Tuberculosis	40	27	17	14	08	11	09	12	12	150	172	1450	1541	- 5.9 %

**Key to Table 1 & 2**

**Provinces:** W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.  
**RDHS Divisions:** CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

**Special Surveillance:** AFP\* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS\*\* =Congenital Rubella Syndrome

NA = Not Available

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.**

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**ON STATE SERVICE**

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