

# Acute Flaccid Paralysis Surveillance

What Clinicians should know

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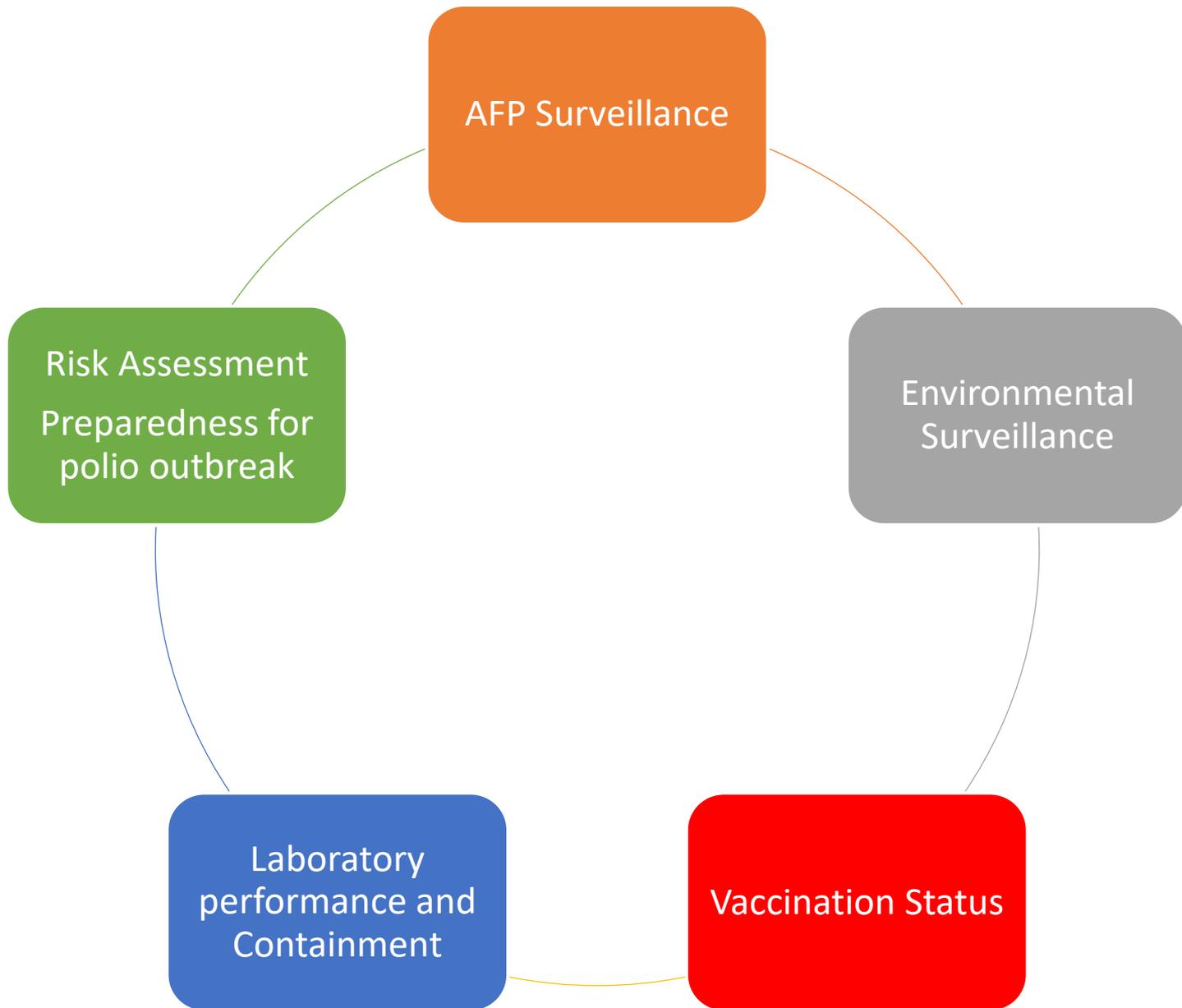
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# Hong Kong is Polio Free

- Annual Report from the National Certification Committee (NCC)
- Chairman – Professor Lau Yu Lung
- Acute Flaccid Paralysis (AFP) Surveillance



▪ **Annex 2: Performance of Acute Flaccid Paralysis Surveillance in Hong Kong, 2017-2022**

↵

Performance Indicators↵	Target↵	Actual Performance↵					
		2017↵	2018↵	2019↵	2020↵	2021↵	2022#↵
Number of non-polio AFP cases per 100 000 population aged < 15↵	> =1↵	1.88↵	1.22↵	1.56↵	1.33↵ (12 cases)↵	1↵ (9 cases)	0.44↵ (4 cases)↵
Percentage of surveillance site providing routine report (including “zero reports”) on time↵	> =80%↵	97%↵	90%↵	90%↵	90%↵	93%↵	92%↵
Percentage of AFP cases investigated↵	> =80%↵	100%↵	100%↵	100%↵	100%↵	100%↵	100%↵
Percentage of AFP cases investigated < 48 hrs↵	> =80%↵	100%↵	100%↵	100%↵	100%↵	100%↵	100%↵
Percentage of AFP cases follow-up at 60 days↵	> =80%↵	100%↵	100%↵	100%↵	91 %↵	100%↵	100↵
Percentage of AFP case with 2 <b>adequate*</b> stool specimens↵	> =80%↵	80%↵	81%↵	71%↵	91%↵	89%↵	50%↵
Percentage of specimen results sent from national laboratory within 14 days of receipt of the specimen in the laboratory↵	> =80%↵	100%↵	100%↵	100%↵	92%↵ ↵	100%↵	100%↵

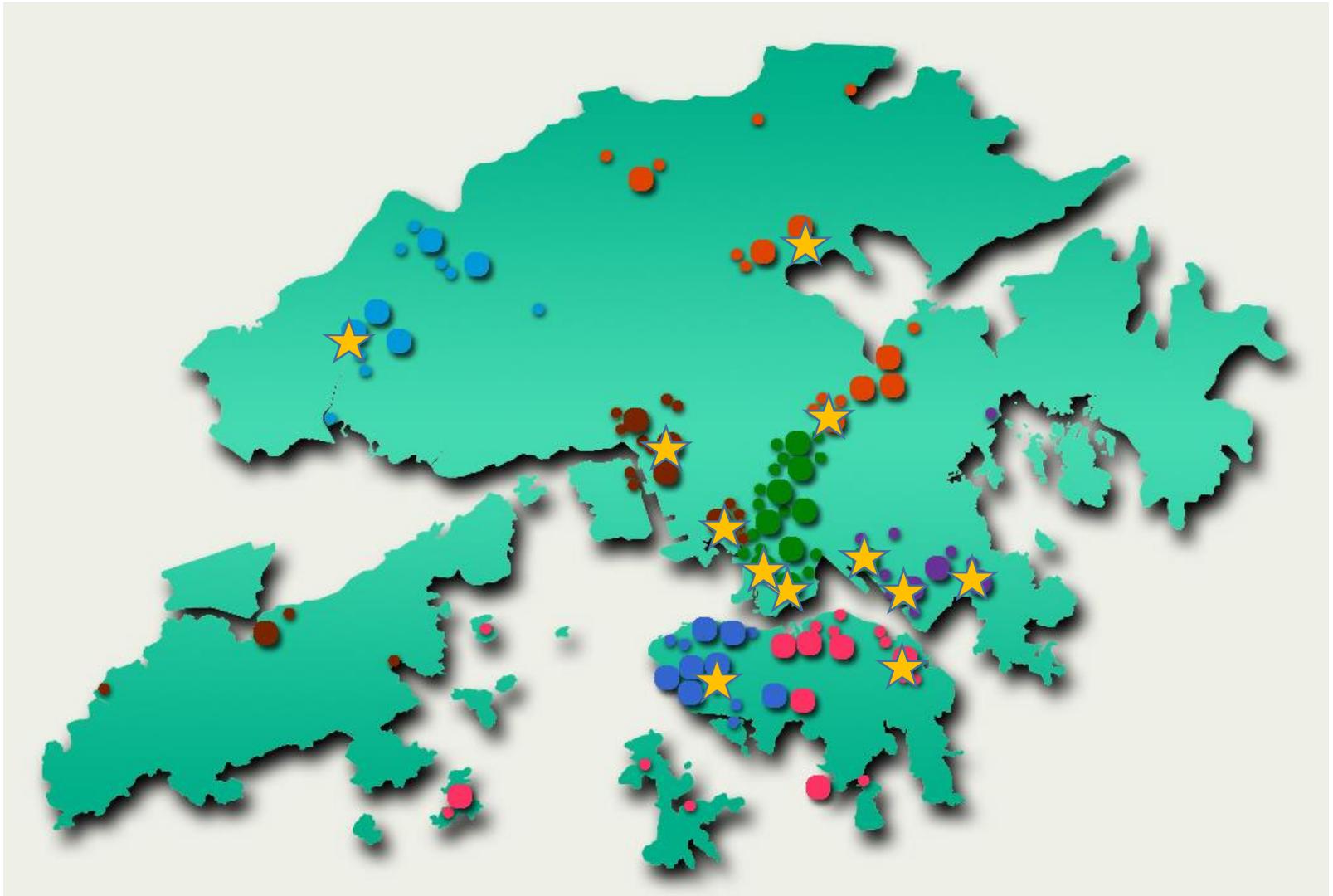
# Position as at 30 June 2022, with annualised rate of 0.89 per 100,000 as of week 26↵

# Points to note

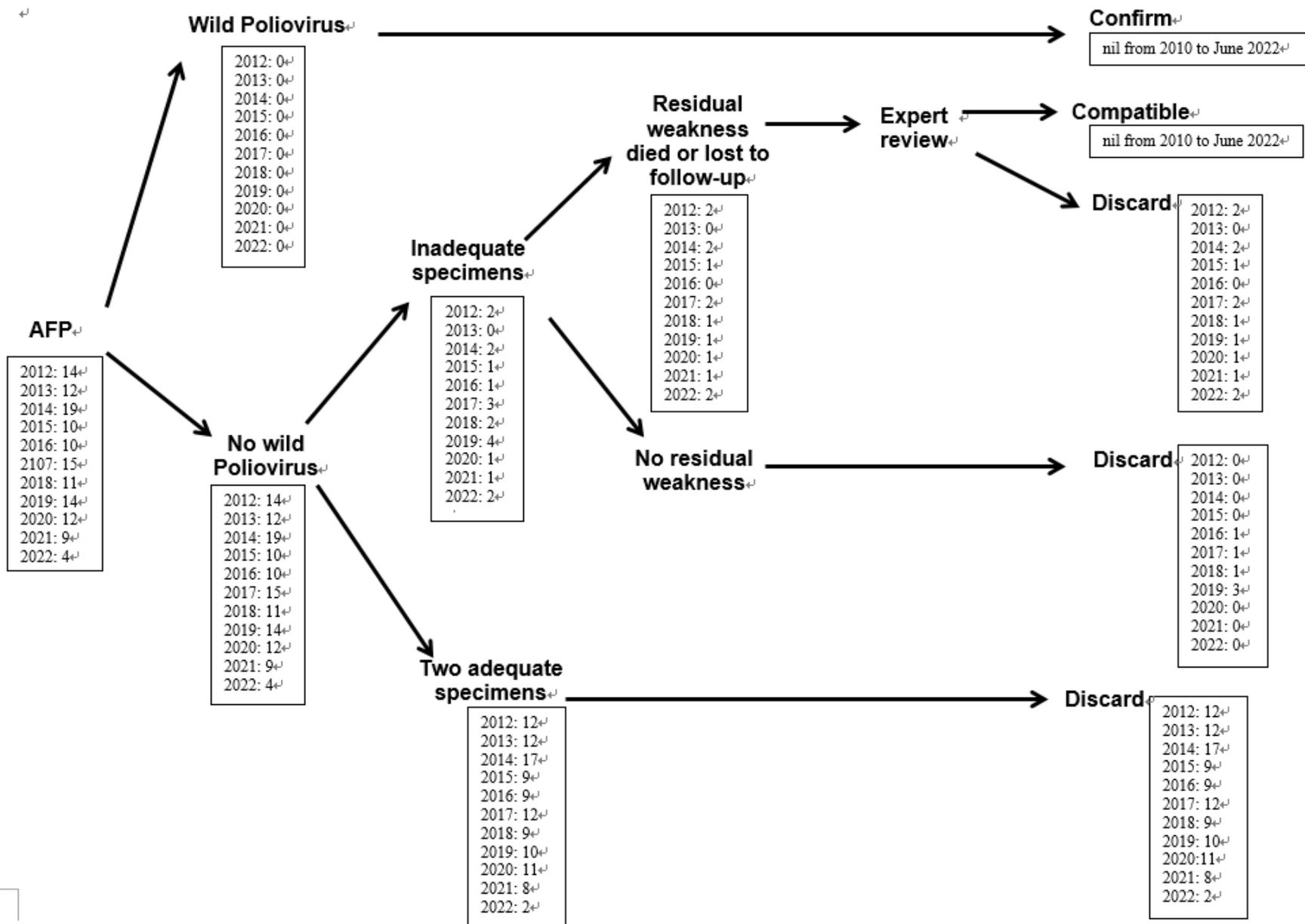
- Within 14 days of symptom onset
  - Problems: late presentation, cross-border presentations
- 2 adequate stool specimens (about the size of two peanuts) 24 hours apart
  - Problems: inadequate specimens, constipation

Hospital Coordinators (“Key Physicians”)  
of all Paediatric Departments

Expert panel



## Annex 6: Virologic classification scheme and case classification



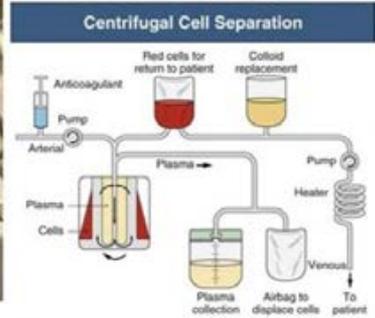
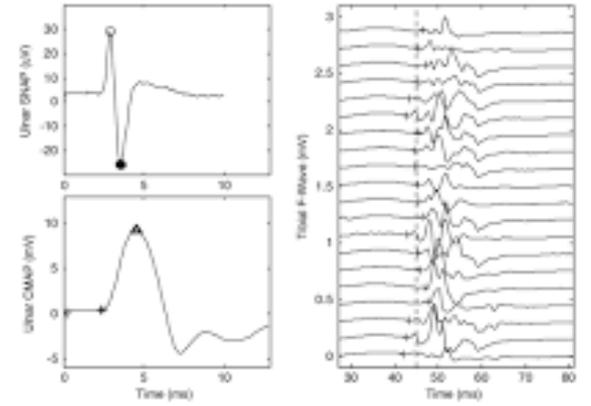
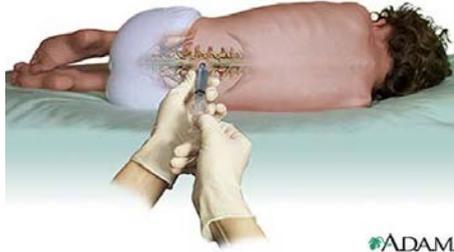
# Common Conditions causing AFP

# Guillain Barre syndrome and variants

- Acute inflammatory demyelinating polyradiculoneuropathy (AIDP)
- Acute motor axonal neuropathy (AMAN)
- Acute motor-sensory axonal neuropathy (AMSAN)
- Miller Fisher syndrome (MFS, anti-GQ1b)
  - Hong Kong has a higher prevalence of MFS (Chiu et al 2022)

**Areflexia** is a prominent feature

Cerebrospinal fluid drawn from between two vertebrae



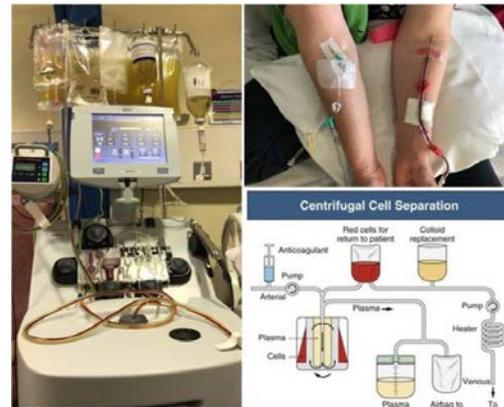
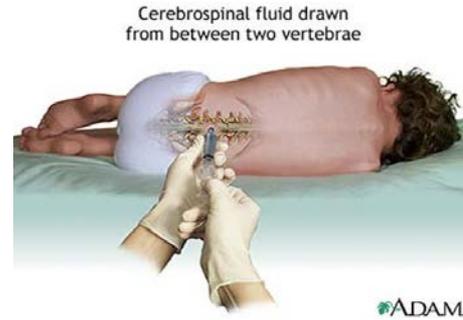
# Transverse Myelitis



- Idiopathic
- Post-infectious
- Longitudinally extensive transverse myelitis (LETM)
- Neuromyelitis optica and Neuromyelitis optica spectrum disorder

# Transverse myelitis

- Tendon reflexes are variably preserved
- Sphincter symptoms may not be prominent at first



# Poliomyelitis

## Polio Elimination in the United States

Updated August 3, 2022

**July 21, 2022:** CDC is aware of a case of polio in an unvaccinated individual from Rockland County, New York, and is consulting with the New York State Department of Health on their investigation. Public health experts are working to understand how and where the individual was infected and provide protective measures, such as vaccination services to the community to prevent the spread of polio to under- and unvaccinated individuals. There is no cure for polio, but it is preventable through safe and effective [vaccination](#).

Poliovirus infections still occur in some countries. Get your child vaccinated on schedule to protect them from polio.

[What is Polio - FAQ](#)

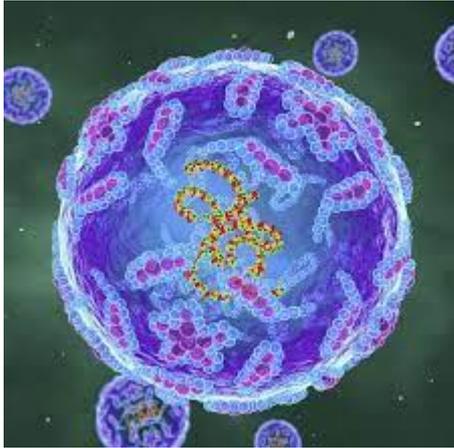
[Resources and References](#)



In the late 1940s, polio outbreaks in the U.S. increased in frequency and size, disabling an







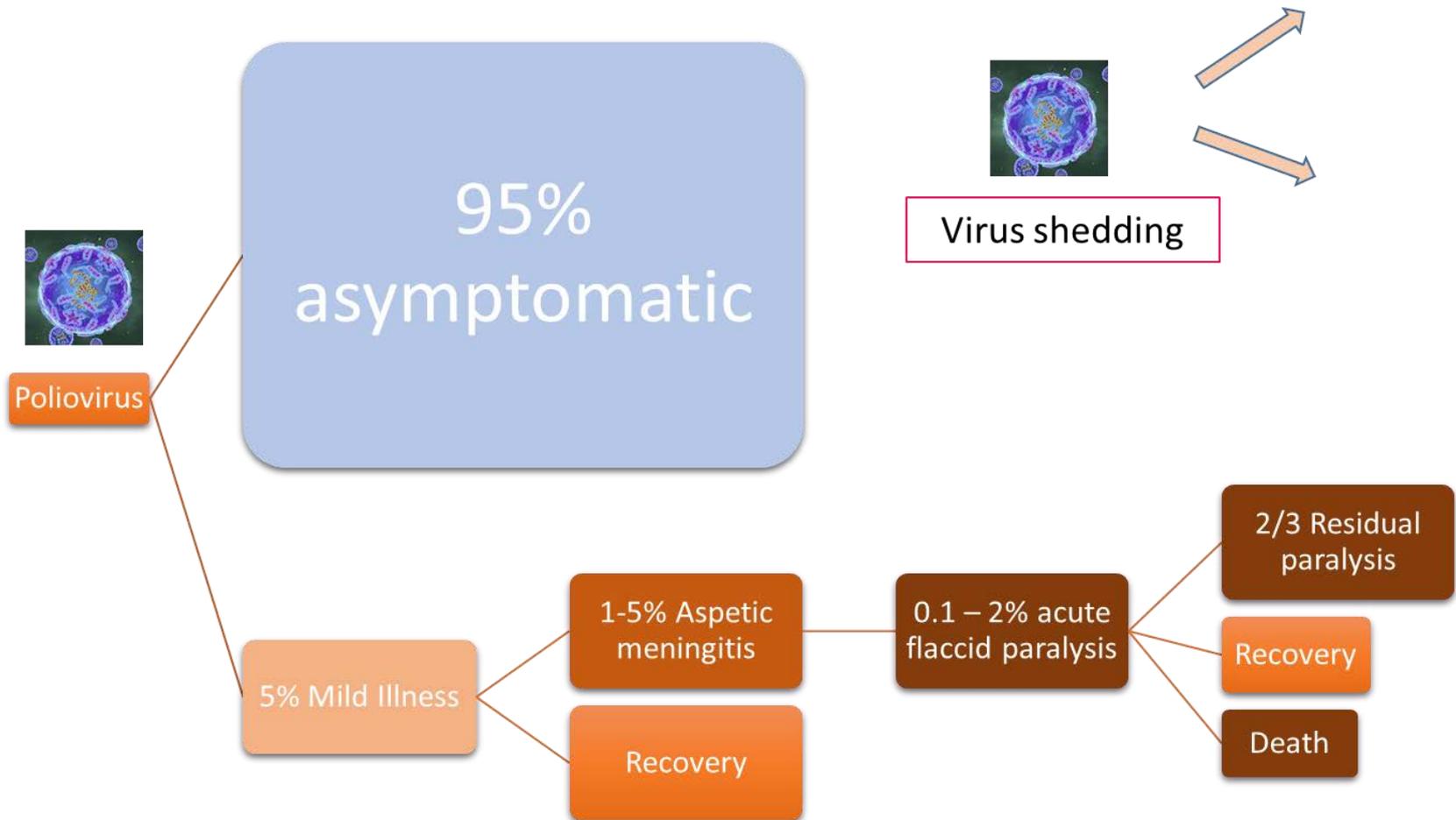
Polio virus

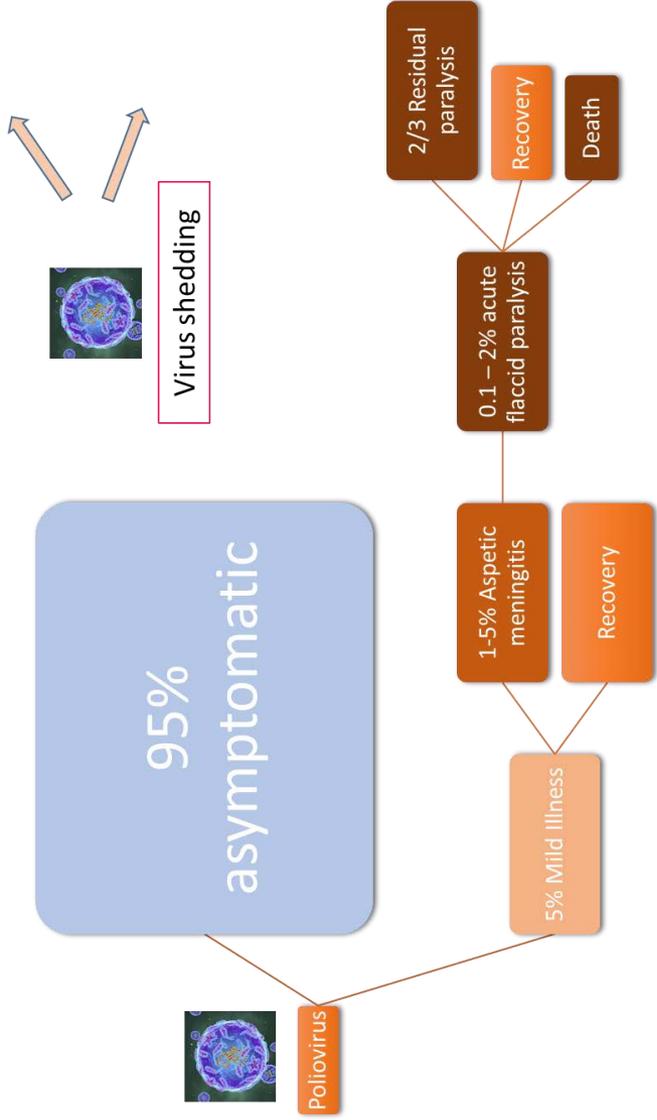


# Poliomyelitis

- Cranial nerve and respiratory muscle involvement may occur
- Incubation period 3 – 7 days, paralysis 7-21 days

# Poliomyelitis





# Population vulnerabilities to polio

- Hong Kong is a low risk region
- Specific population may be vulnerable
  - Immunodeficient patients
  - Vaccine derived poliovirus
  - Wild type polioviruses

# GBS, TM vs Poliomyelitis

## **GBS / TM**

- Symmetrical paralysis
- Usually no preceding aseptic meningitis
- Areflexia

## **Poliomyelitis**

- Asymmetrical paralysis
- Aseptic meningitis
- Areflexia



Jonas Salk



Albert Sabin



# Enterovirus (nonpoliovirus) infection

- Non-specific febrile illness
- Upper respiratory tract infection, herpangina
- Exanthem
- Neurologic – aseptic meningitis, encephalitis, **motor paralysis**
- Gastrointestinal – diarrhea, hepatitis, pancreatitis, orchitis
- Eye – Conjunctivitis, uveitis
- Myopericarditis
- Myositis

## Health Topics



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### Communicable Diseases

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## Enterovirus 71 Infection



24 April 2020

[Click here to view the thematic webpage of Prevention of Hand, Foot and Mouth Disease and Enterovirus 71 Infection](#)

### Causative agent

Enterovirus 71 (EV71) is a single-stranded RNA virus and is one of the causative agents for hand, foot and mouth disease (HFMD). EV71 infection occurs commonly in Southeast Asian areas, especially in summer and early autumn. Outbreaks have been reported in Australia, Mainland China, Malaysia, Singapore, Taiwan, etc.

### Clinical features

EV71 infection usually affects young children. Patients commonly present with symptoms of HFMD, characterised by fever, sores in the mouth and a rash with blisters. The illness usually begins with fever, poor appetite, tiredness and sore throat. One or two days after fever onset, painful sores may develop in the mouth. They begin as small red spots with blisters and then often become ulcers. They usually appear on the tongue, gum and inside of the cheeks. There may also be a skin rash that is non-itchy and sometimes accompanied by blisters. The rash usually appears on the palms of the hands and soles of the feet and may also appear on the buttocks and/or genitalia. A person with HFMD may not have symptoms, or may only have rash or mouth ulcers. EV71 may cause more serious diseases, such as viral (aseptic) meningitis, encephalitis, poliomyelitis-like paralysis and myocarditis.



The incubation period commonly ranges from 3 - 5 days.

# Other causes

- Malignancy causing spinal cord compression or peripheral neuropathy
- Acquired peripheral neuropathy
- Polymyositis / Dermatomyositis
- Functional disorders
- Brachial plexopathy

# Conclusion

- Acute flaccid paralysis under the age of 15 years old may come to the attention of family physicians, paediatricians, paediatric neurologists, neurologists and orthopaedic surgeons
- We are used to the common AFP cases. But do not forget the reason of AFP surveillance – to detect polio
- We must know poliomyelitis – watch for reappearance of the illness

THANK YOU

