

Seasonal Influenza Vaccination (SIV) in NTEC



Dr. Raymond Lai (Chief Infection Control Officer & PWH ICO) and Ms. Gloria Chiu (NTEC nurse consultant of ICN) receiving SIV.

NTEC hospitals are actively promoting and encouraging staff to early receive vaccine against seasonal influenza. As of 9 Dec 2019, 53.05% staff in PWH and 51.37% of NTEC staff were vaccinated. Also, the staff vaccination rate in NTEC is the highest among 7 clusters in HA.

On the other hand, it takes about two weeks to develop antibodies against seasonal influenza after being vaccinated. Staff is encouraged to get vaccinated early for Christmas and New Year holidays.



Group photo of PWH infection control team promoting SIV

Under-vaccination of the Populations Opens the Door to Measles

Measles has swept many countries and regions recently, causing 10 million cases and 140,000 deaths in 2018 that most were young children who had not been vaccinated. Measles vaccine is considered effective to prevent related morbidity and mortality. In 2000-2018, it was estimated that measles vaccination alone had prevented around 23.2 million deaths worldwide. However, resistance to vaccines of the public at large has become the culprit of the global measles outbreak, according to the World Health Organization.

Under-vaccination heavily devastates both developing and developed countries. In the Philippines, the measles vaccination rate dropped to less than 70% in 2017 due to an anti-vaxx controversy. As of November 2019, the number of suspected measles cases in Manila area skyrocketed to 44,000. Meanwhile in the United States, there were more than 1,200 confirmed measles cases across the country. Over 120 people were hospitalized whom were mostly not vaccinated against measles.

The WHO and UNICEF estimated that 86% of children globally received the first dose of measles vaccine through their country's routine vaccination services in 2018, and fewer than 70% received the second recommended dose. However, it is required to achieve 95% vaccination coverage with two doses of measles vaccine so as to protect the populations from the disease.

Global upsurge of measles especially in areas with close ties to Hong Kong has posed elevated risk of spill over infection to HK via importation. This year, the Centre for Health Protection recorded an upsurge of measles cases, including a total of 87 confirmed measles cases. Importation is expected to happen among foreign visitors to Hong Kong and local residents exposed to measles while travelling abroad.

To safeguard the health of staff and patients, the HA Staff Measles Vaccination Program (SMVP) has put in place since 1 April 2019. Eligible HA staff should receive 2-dose measles vaccines. To register vaccination, please contact respective Staff Clinic.

HA Staff Measles Vaccination Program (SMVP)

Eligibility criteria:

1. Born in or after 1967;
2. Do not have TWO documented doses of measles vaccinations;
3. Do not have documented history of measles infection; AND
4. Do not have documented evidence of immunity.

Please make an appointment for vaccination through staff clinics:

RTSK Tel: 3553 3221	QMH Tel: 2255 1374
QEH Tel: 3506 5300	UCH Tel: 5215 6893
CMC Tel: 3408 6938	OLMH Tel: 2354 0557
PWH Tel: 3505 2024	TMH Tel: 3767 1799

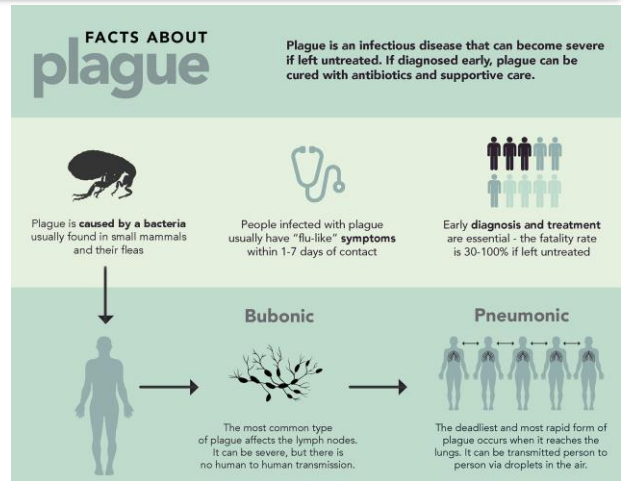
References:

1. WHO. Joint News Release. <https://www.who.int/news-room/detail/05-12-2019-more-than-140-000-die-from-measles-as-cases-surge-worldwide>
2. CHP: An Update on Infectious Diseases in Hong Kong. http://www.cuhk.edu.hk/med/ceid/images/asm/16_asm/Dr%20KH%20WONG.pdf

Current Topic: The Plague (Part 2)

Plague is a zoonotic disease affecting rodents and transmitted by fleas from rodents to other animals and to humans. Human can also contract plague when cuts or other breaks in their skin come into contact with the body fluid or tissues of infected animals, or through inhalation of infected respiratory droplets.

There are three clinical forms including bubonic plague, septicaemic plague, and pneumonic plague. Bubonic plague, the commonest form, refers to the lymphadenitis which develops in the lymph nodes that drain the site of flea bite. Septicemic plague refers to bloodstream dissemination of the bacterium. Pneumonic plague is the infection involving lung parenchyma and is the only form that can lead to secondary spread by person-to-person transmission through infectious respiratory droplets. Plague may also manifest in other less common clinical forms such as pharyngeal plague, meningial plague, and plague endophthalmitis.



WHO - Facts about plague

The incubation period of plague infection ranged from 1 to 7 days, but it is usually shorter for pneumonic plague which ranges from 1 to 4 days. Untreated bubonic plague has a case-fatality rate of about 50-60%, while untreated primary septicemic plague and pneumonic plague have a case-fatality ratio of 30% to 100%. If diagnosed early, plague can be cured with antibiotics and supportive care. The overall mortality rate can be reduced to less than 15% after early appropriate antimicrobial therapy.

References:

1. WHO. Facts about Plague <https://www.who.int/mediacentre/infographic/plague/en/>
2. CDC. Plague-Frequently Asked Questions. <https://www.cdc.gov/plague/faq/index.html#basic>
3. CHP. Scientific Committee on Vector-borne Diseases Situation of Plague and Prevention Strategies https://www.chp.gov.hk/files/pdf/diseases-situation_of_plague_and_prevention_strategy_r.pdf

Form of plague	Clinical manifestations
Bubonic plague	<ul style="list-style-type: none"> • Fever, chills, malaise, myalgia, nausea, prostration, sore throat and headache • Swollen, tender and painful lymphadenitis (bubo) at regional lymph nodes of flea bite
Septicemic plague	<ul style="list-style-type: none"> • Fever, endotoxic shock and disseminated intravascular coagulation (DIC) • Necrosis of small vessels and purpuric skin lesions • Gangrene of acral regions such as fingers, toes, and the nose
Pneumonic plague	<ul style="list-style-type: none"> • Fever, chills, cough, and haemoptysis • Pneumonia with shortness of breath, chest pain • Respiratory failure and shock

Innovation in Mosquito Trap to Control and Prevent Mosquito-borne Diseases

Mosquito-borne viruses such as Dengue, Chikungunya and the Zika virus are rapidly spreading in the world. The Aedes mosquitoes are difficult to control as it divides its eggs over small, hard to find breeding sites, and become resistant to chemical insecticides.

Recently, a novel mosquito trap, namely In2Care®, has been used in the outdoor area of North District Hospital to attract and kill both the mosquito larvae and adults with the following two bioactive ingredients:



- Pyriproxyfen, an insect growth regulator. It mimics natural insect hormones that stop young insects from maturing into adults.
- Beauveria bassiana, spores of fungus of which Aedes mosquito are susceptible to infection.

In2Care® Mosquito trap

The mosquito trap consists of a black plastic container and uses odored water to attract egg-laying Aedes mosquitoes. When the gravid mosquito enters the trap and lands on the gauze treated with the larvicide and the fungus, she will be contaminated and disperse the larvicidal powder from her body onto the other breeding sites where she is going to lay eggs on and inadvertently kill the larvae there. The fungus will enter her body and kill her within 5-10 days.

The mosquito trap can be placed outdoors at a recommended density of 1/400 m² (10 traps per acre) and be maintained every 4 weeks using refill sachets. Both the fungus and larvicide have been approved by the US-Environmental Protection Agency (EPA) with short half-lives that pose very low risks for non-target organisms.

