

Situation Update on Measles

Global data showed that the number of measles cases reported to the World Health Organization (WHO) rose by 300% in the first 3 months of 2019, compared to the same period in 2018.

In Hong Kong, as of 17 April, total 66 measles infections (41 males and 25 females), aged from 8 months to 49 years, were reported. Sixty-two of the cases were admitted to HA hospitals and all were discharged. The average length of stay was 4 days.

Among the 66 measles cases, 29 cases were associated with the outbreak among workers in the Hong Kong International Airport; 4 cases involved in 2 household clusters; 2 cases were healthcare workers; 31 cases did not have obvious epidemiological linkage in which 10 of them were classified as imported and the remaining cases are under investigation.

Staff are reminded to stay vigilant towards patients with symptoms of measles. Suspected cases should be notified and treated under airborne infection isolation with specimens sent to the Public Health Laboratory Service Branch for testing.

WHO: [New measles surveillance data for 2019](#)



Experience of the Netherlands: Measles Outbreak Among Previously Immunized Healthcare Workers

In 2014, a nosocomial outbreak of measles among twice-vaccinated healthcare workers (HCWs) was reported in a hospital located in the western Netherlands. A total of 8 HCWs were affected subsequent to the admission of 2 index patients with measles.

In this outbreak, 6 HCWs were vaccinated with measles vaccine twice, 1 was vaccinated once, and 1 was unvaccinated. All 6 twice-vaccinated cases had high pre-illness and/or per-illness avidity measles IgG antibodies, indicative of a secondary immune response to natural measles virus infection. Five of them with a per-illness serum available tested negative for IgM. In addition, convalescent PRN titers for 4 of 6 twice-vaccinated cases were > 40,000 mIU/mL. Secondary vaccine failure was classified for these 4 twice-vaccinated cases due to the presence of preexisting antibodies before infection and high antibody titers of high avidity shortly after infection. Interestingly, 2 of 4 twice-vaccinated cases with pre-illness sera had relatively high PRN titers of > 120 mIU/mL which was used as a cutoff for clinical protection.

The secondary immune response to natural measles virus infection in twice-vaccinated cases was instrumental in the rapid clearance of the virus, thereby reducing virulence, clinical severity, as well as contagiousness

among measles cases. It was consistent with the outcomes that none of the twice-vaccinated cases had severe measles, and none had onward transmission. The once-vaccinated case had presented with chest infection and mild diarrhea while the unvaccinated case had severe measles requiring hospitalization for pneumonia, pleurisy and abnormal liver function tests.

In conclusion, improving the 2-dose MMR vaccination coverage among HCWs could reduce the size and severity of nosocomial outbreak of measles.

Reference: J. M. Hahné, et al. (2016). Measles Outbreak Among Previously Immunized Healthcare Workers, the Netherlands, 2014. *Journal of Infectious Diseases*. 214. 1980-1986.

ICT-To-Note

1. **End of winter influenza season 2019:** The Centre for Health Protection (CHP) announced the end of the winter influenza season on 10 April. This season lasted for about 14 weeks from the week of 30 December 2018, to the week ending 6 April.
2. **Precautionary measure for prevention of sexual transmission of Zika virus:** As updated by the CHP, male and female travellers returning from affected areas should abstain from sex for at least 3 months and at least 2 months respectively (reduced from 6 months) upon return, or else condom should be used.

Summary Statistics of Winter Influenza Season 2019

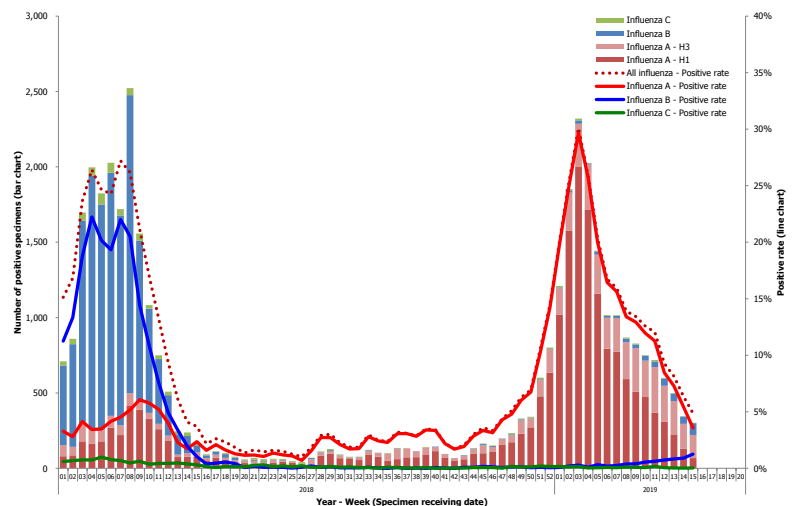
Hong Kong entered the winter influenza season in early January 2019. The influenza activity peaked around mid to late January and started to decrease continuously and returned to the baseline level in early April. Positive rate of influenza (all types) from PHLSB data dropped further to 4.9% last week (figure 1). The CHP declared the end of this winter influenza season on 10 April.

In this influenza season (30/12/2018 - 06/04/2019), the percentages of influenza A (H1) and A (H3) positive were 75.1% and 22.0% respectively.

Total 79,199 patients were tested for seasonal influenza by RT-PCR in HA laboratories during the same period and the overall positive rate was 18.0%.

For severe influenza cases identified in HA, there were 585 adult cases (including 353 deaths) of influenza-associated admission to the ICU or death; and 24 cases (including 1 death) of paediatric influenza-associated complications/ deaths in this influenza season.

Figure 1: Number of positive results and positive rate – Influenza (all types)



SHEA Expert Guidance - Infection prevention in the operating room anesthesia work area

Research has shown that contamination in operation room (OR) anesthesia work area can lead to patient infections. The Society for Healthcare Epidemiology of America (SHEA) had recently released guidance on implementing infection prevention specific to the anesthesia work area. The following recommendations were based on a synthesis of limited evidence and theoretical rationale while taking into account the realities of the OR and the complexities involved in providing anesthesia services.

- Based on WHO “Five Moments” for hand hygiene (HH), HH should be performed before aseptic tasks, e.g. inserting intravenous (IV) catheters, drawing medications, spiking IV bags; after removing gloves; when hands are soiled or contaminated, e.g. oropharyngeal secretions; before touching the contents of the anesthesia cart; and when entering and exiting the OR.
- Alcohol-based hand rub dispensers should be placed at the entrance to ORs and at point of care.
- Injection ports, rubber stopper of medication vials and ampoules should be disinfected before each injection.
- Single-dose medication vials and flush should be used whenever possible, or use multiple-dose medication vials for only one patient and accessed with a new sterile syringe and a new needle for each entry.
- Needless syringe of multiple doses of a drug should be capped after each administration dose.
- All central venous catheters, axillary and femoral arterial lines should be inserted with full maximal sterile barrier precautions, including wearing mask, cap, gown and sterile gloves and using a large sterile drape during insertion.
- Peripheral arterial lines should be placed with a minimum of a cap, mask, sterile gloves and a small sterile fenestrated drape.
- Reusable laryngoscope handles and blades should undergo high-level disinfection or sterilization, or be replaced with single use alternatives.
- High-touch surfaces on the anesthesia machines, supply cart, anesthesia work area, keyboards and commonly used items, such as ECG leads, pulse oximeter probes etc. with physical contact with patients should be prioritized for cleaning and disinfection.
- Regular monitoring, evaluation and feedback to anesthesia staff should be conducted to improve performance and adherence to infection control practices, e.g. hand hygiene, environmental cleanliness.



Reference:

Munoz-Price LS, *et al.* (2019). Infection prevention in the operating room anesthesia work area. *Infection Control & Hospital Epidemiology* 2019, 40, 1-17.