HOSPITAL AUTHORITY
CICO's Biweekly Update
Volume 9, Number 13 (Published on Week 38, 20th September 2019)

2019-2020 Seasonal Influenza Vaccine (SIV) Composition

As influenza viruses continuously change and evolve over time, ongoing monitoring and frequent reformulation of influenza vaccines is therefore necessary to keep them effective against the circulating influenza viruses. In March 2019, the World Health Organization (WHO) finalized the recommendations on the composition of SIV for the use in 2019-2020 northern hemisphere season.

The Scientific Committee on Vaccine Preventable Diseases under the Centre for Health Protection follows the recommendations by the WHO for the 2019-2020 season in Hong Kong. Please note that two of the vaccine viral strains recommended for the 2019-2020 northern hemisphere influenza season differ from those of the previous influenza season as highlighted in table 1.

Table 1: Quadrivalent influenza vaccine composition for the 2019-2020 season in Hong Kong

	2018-2019 season	2019-2020 season
Influenza A	an A/Michigan/45/2015 (H1N1)pdm09-like virus;	an A/Brisbane/02/2018 (H1N1)pdm09-like virus;
	an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus;	an A/Kansas/14/2017 (H3N2)-like virus;
Influenza B	a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage);	a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage);
	a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).	a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

Vaccine Effectiveness (VE)

Study of VE of SIV at primary care settings in Hong Kong found that the overall VE among all ages was 57.9% against all influenza viruses and 60.2% against influenza A(H1) in 2018-2019 season, providing a moderate to good protection. Another local hospital based study on paediatric hospitalized patients showed that the interim VE was 90% overall and 92% against influenza A(H1).

Among adverse events after administration of inactivated influenza vaccines, 15-20% of recipients developed local reactions at site of injection and less than 1% with non-specific systemic symptoms, such as fever, chills, malaise and myalgia.

Healthcare workers (HCWs) are one of the priority groups recommended to receive SIV annually to reduce their morbidity and absenteeism related to respiratory infections. Besides, the risk of transmitting influenza to patients who are at high risk of complications and mortality from influenza can also be reduced.

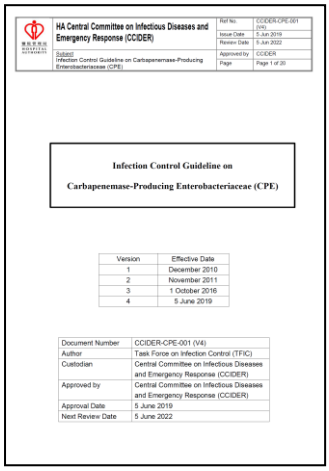
HA offers SIV to all staff every year. All are encouraged to get the flu shot before the winter influenza season arrives.

CDC - Flu vaccine benefits.

References:
1. CHP - Recommendations on Seasonal Influenza Vaccination for the 2019-20 Season in Hong Kong, Scientific Committee on Vaccine Preventable Disease, April 2019: https://www.chp.gov.hk/files/pdf/recommendations_on_siv_for_2019_20_season_in_hong_kong.pdf
2. WHO - Recommended Composition of Influenza Virus Vaccines for Use in the 2019-2020 Northern Hemisphere Influenza Season: https://www.who.int/influenza/vaccines/virus/recommendations/2019_20_north/en/

Update on Infection Control Guideline on Carbapenemase-Producing *Enterobacteriaceae* (CPE)

In Jun 2019, HA Infection Control Guideline on CPE was updated with major changes highlighted below:


HA Central Committee on Infectious Diseases and Emergency Response (CCIDER)

Infection Control Guideline on Carbapenemase-Producing Enterobacteriaceae (CPE)

Infection Control Guideline on Carbapenemase-Producing Enterobacteriaceae (CPE)

Version	Effective Date
1	December 2010
2	November 2011
3	1 October 2016
4	5 June 2019

Document Number	CCIDER-CPE-001 (V4)
Author	Task Force on Infection Control (TFIC)
Custodian	Central Committee on Infectious Diseases and Emergency Response (CCIDER)
Approved by	Central Committee on Infectious Diseases and Emergency Response (CCIDER)
Approval Date	5 June 2019
Next Review Date	5 June 2022

1) ***Active surveillance culture:*** On top of screening patients who have history of hospitalization outside Hong Kong in the last 12 months, admission screening to high risk units (e.g. ICU, Haematology) can also be considered with reference to the local scenario.

2) ***Clearance of CPE carriage:***
   - Clearance of CPE carriage with release from single room isolation and contact precautions can be considered if at least 3 consecutive screenings are negative (collected at least 48 hours apart and 48 hours after completing antibiotic treatment), including all previous positive body sites.
   - Rescreening is required on every subsequent admission within 12 months after first clearance to detect any relapse of CPE carriage.

3) ***Contact tracing:***
   - For contact tracing related to a confirmed CPE case from clinical specimen which is collected within 48 hours of admission, scope of tracing can be restricted to cubicle. Otherwise, all patients staying in the same ward as the index case should be screened.
   - Discharged CPE contacts will be tagged in CMS alert. CMS tagging would be removed after screening is done and result is negative upon readmission. If no readmission and thus no screening done in one year, CMS tagging will automatically expire after one year.

Reference:
HA Infection Control Guideline on Carbapenemase-Producing *Enterobacteriaceae* (CPE). http://ha.home/ho/ps/IC_GL_CPE.pdf

Surgical Masks vs. N95 Respirators for Influenza and Respiratory Virus Protection

Wearing masks is all along one of the crucial infection control measures against influenza and respiratory viruses, especially among HCWs who are at risk when treating patients with respiratory infections. There has been a controversy that whether the surgical mask is as adequate as N95 respirator to protect HCWs from influenza and other respiratory viruses.

A study published in JAMA in September 2019 may put an end to this argument. It compared the effectiveness of N95 respirators vs surgical masks for the prevention of flu and other respiratory infections among HCWs. Conducted by the Centers for Disease Control and Prevention and various research teams from academia, the study took place at several out-patient healthcare settings across 7 cities in the US.

Data during 4 influenza seasons between 2011 and 2015 were collected to examine the incidence of influenza and acute respiratory illnesses among nearly 2,400 HCWs who completed the study. Each year during the 12-week peak period of viral respiratory infections, pairs of outpatient sites of each centre were matched and randomly assigned to the N95 respirator or medical mask groups. (1,993 participants were randomly assigned to wear N95 respirators while 2,058 wear surgical masks when near patients with respiratory illnesses.) The study was the largest ever done on the topic in North America.

It was found that 207 laboratory confirmed influenza infections occurred in the respirator group as compared to that of 193 in the surgical mask group. Moreover, there were 2,734 cases of influenza-like symptoms, laboratory-confirmed respiratory illnesses, and acute or laboratory-detected respiratory infections in the respirator group, whereas 3,039 cases in the surgical mask group.

This trial showed that N95 respirators were not significantly superior to surgical masks when it came to protection of flu and respiratory viruses in the out-patient settings as reflected by the insignificant difference in the concerned incidence.

Reference:
Radonovich LJ, Simberkoff MS, Bessesen MT, et al. N95 Respirators vs Medical Masks for Preventing Influenza Among Health Care Personnel: A Randomized Clinical Trial. JAMA. 2019;322(9):824–833. doi:10.1001/jama.2019.1164