

Epidemiology of seasonal influenza in Hong Kong and use of seasonal influenza vaccines

Sep 2022



衛生署
Department of Health

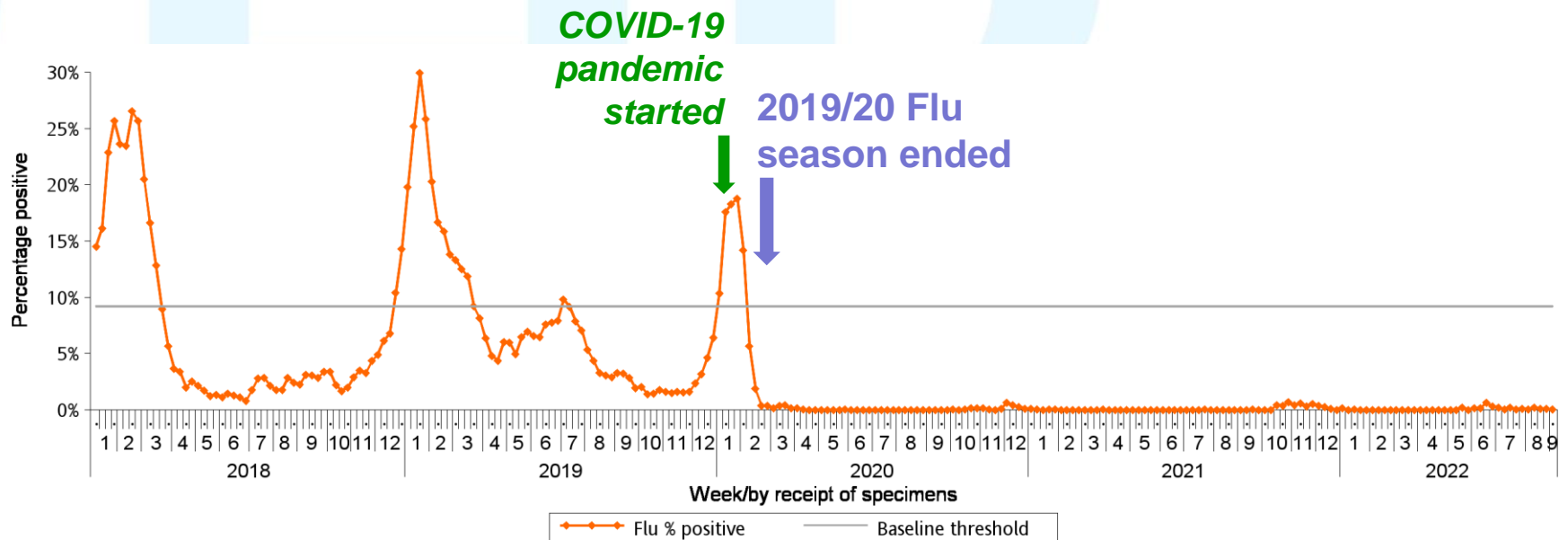
Overview of seasonal influenza in HK

- Usually 2 influenza seasons each year
 - Main season: **winter season**
(between Jan and Mar/Apr)
 - Usually last for 12-16 weeks
(except 7 weeks in 2016/17, 5 weeks in 2019/20)
 - No 2020/21 and 2021/22 winter seasons
 - Another **summer season** with variable timing
(between Jun and Aug)
 - Usually shorter duration
(except 2017 summer season with 16 weeks)
 - Not occurred in some years
(e.g. no summer season in 2018 - 2021)

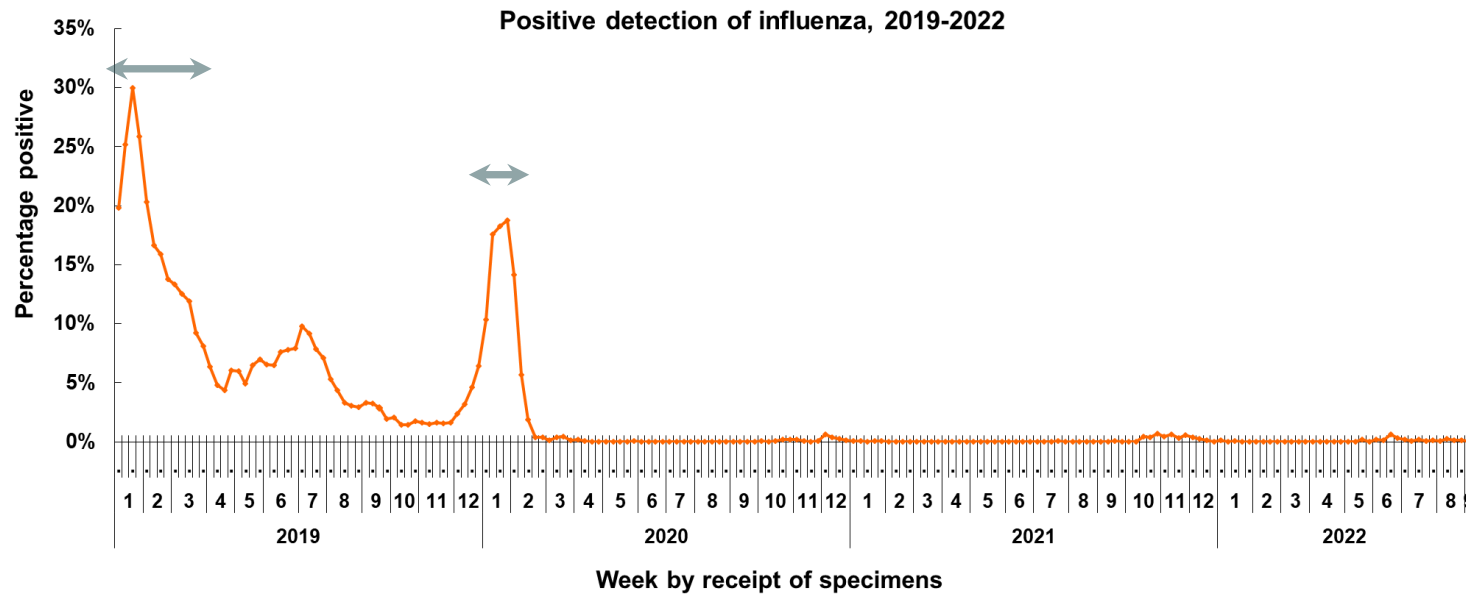
- However,...

Low influenza activity since end of 2019/20 winter influenza season in HK

- Influenza activity remained low after the end of winter influenza season on Feb 2020



Duration of winter influenza seasons



Season	Week start to end	Duration
2018/19 winter season	Week 1 to 14	14 weeks
2019/20 winter season	Week 2 to 6	5 weeks
2021 - No flu season	-	-
2022 - No flu season	-	-

Shortened duration

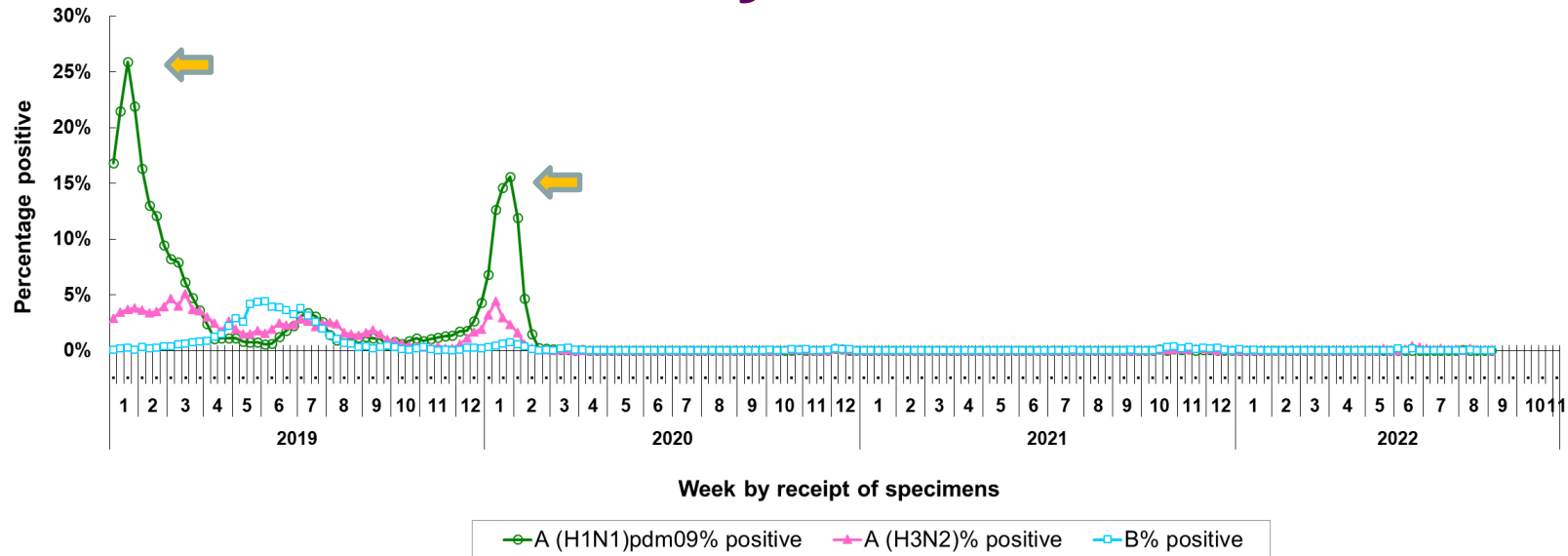
- **Last flu season occurred in HK,...**

2019/20 winter influenza season in HK

- Mild season, reflected by rapid decrease in influenza activity in Feb 2020
 - influenza detections
 - institutional influenza-like illness (ILI) outbreaks
 - influenza-associated hospitalisations
- Likely related to **intensive** prevention measure adopted by the whole community for COVID-19, such as hand hygiene, mask wearing, social distancing, etc.

- Similar data pattern from other surveillance systems...

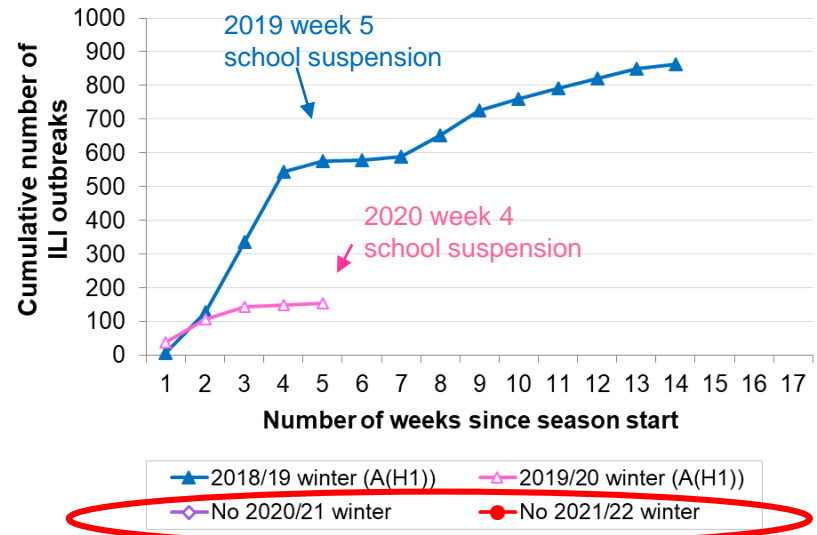
Laboratory surveillance



Season	Peak percentage of flu positive detection	Predominating viruses
2018/19 winter season	30.0%	A(H1)
2019/20 winter season	18.8%	A(H1)
2021 - No flu season	-	-
2022 - No flu season	-	-

ILI outbreaks in schools/institutions during past flu seasons

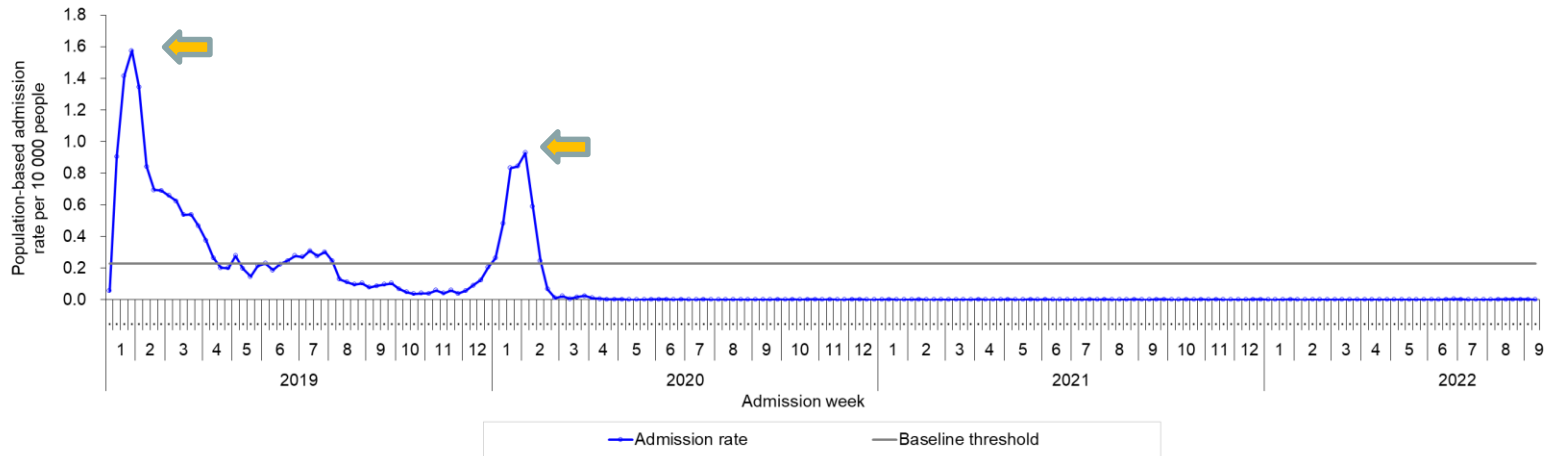
- With shorter season duration, total no. of institutional ILI outbreaks decreased in 2019/20 season
- No flu seasons in 2021 and 2022



Season	No. of ILI outbreaks	Peak of weekly no. of ILI outbreak	Overall school outbreak%
2018/19 winter season	862	209	86%
2019/20 winter season	153	66	71%
2021 - No flu season	—	—	—
2022 - No flu season	—	—	—

Influenza-associated admission rates in public hospitals

- Peak weekly admission rates continued to decrease in past years



Season	Peak weekly admission rate	Peak weekly admission rate		
		0-5 years	6-11 years	≥65 years
2018/19 winter season	1.58	11.06	1.96	2.97
2019/20 winter season	0.93	5.10	1.17	1.87
2021 - No flu season*	0.003	0.03	0	0.01
2022 - No flu season*	0.001	0	0.03	0

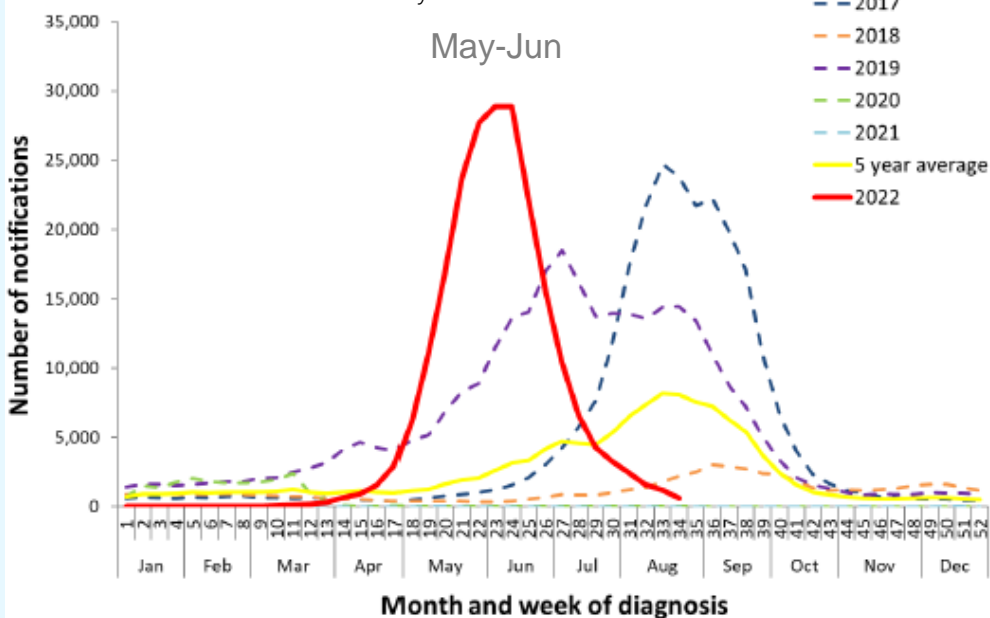
* Admission data in Jan to Mar

Resurgence of influenza activity in overseas countries

Upsurge of influenza activities in countries in southern hemisphere

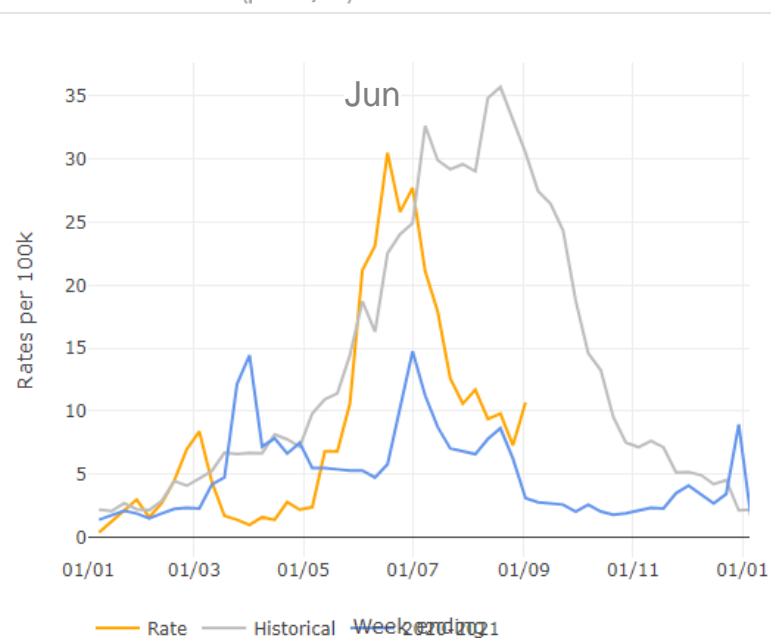
Australia

Notifications of laboratory-confirmed influenza



New Zealand

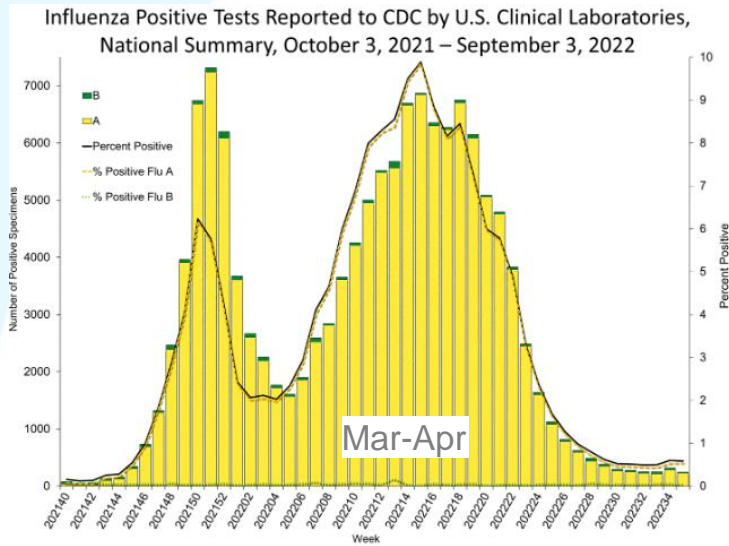
HealthStat National ILI rate (per 100,000)



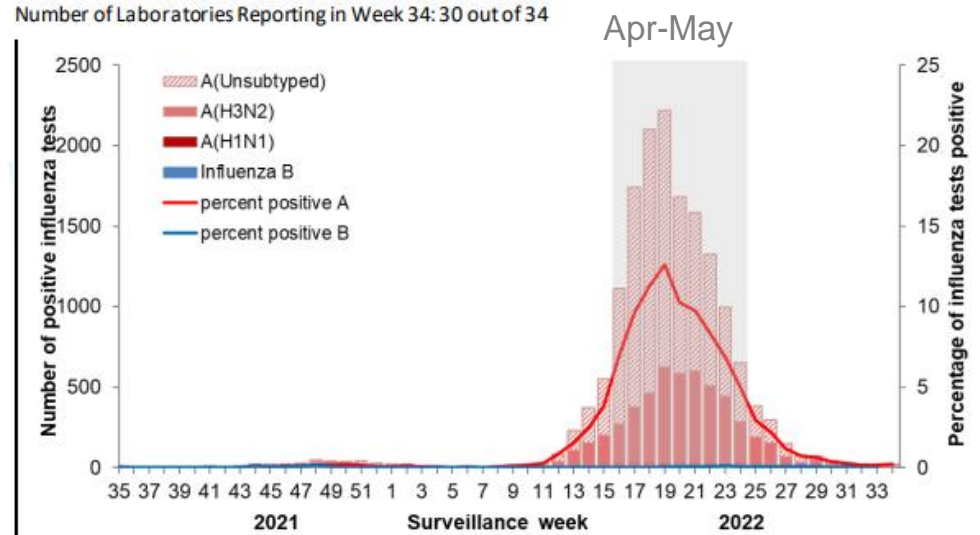
- Influenza activities in Australia and New Zealand have increased during 2022 winter in southern hemisphere

- Also some increases in influenza activities in northern hemisphere this year...

US

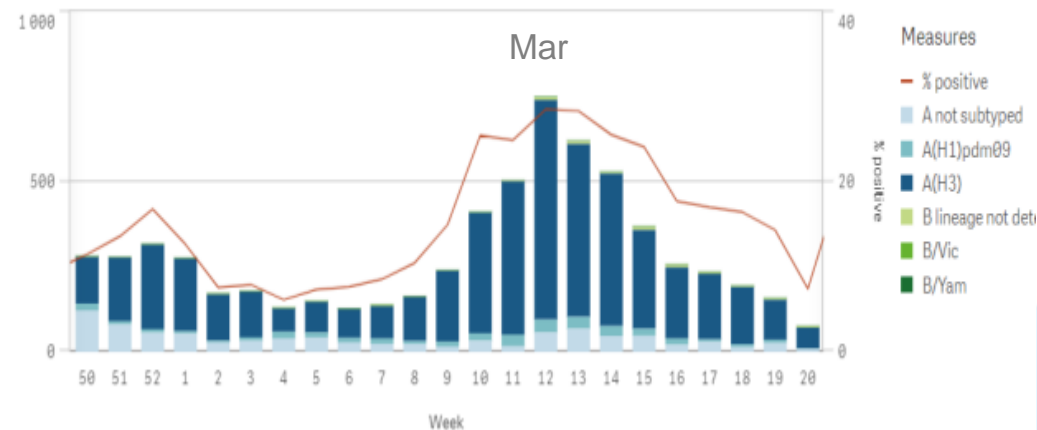


Canada

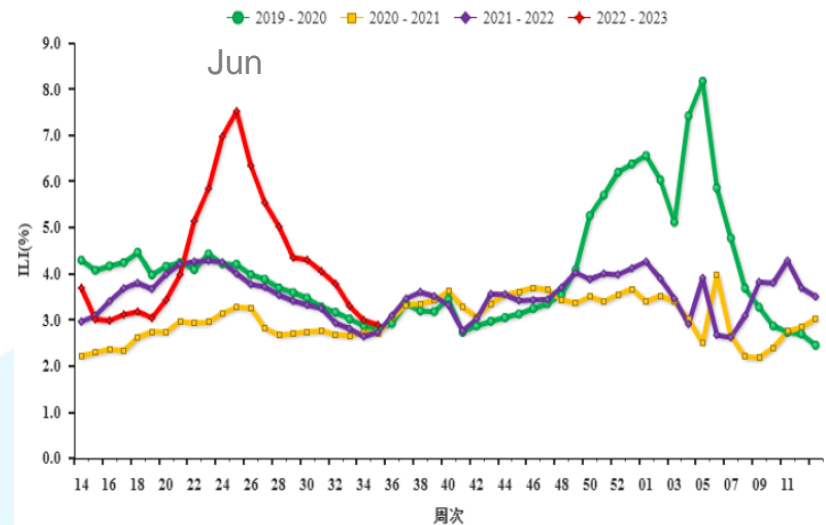


Europe

Influenza virus positivity and detections by type, subtype/lineage and week - WHO Europe, season 2021/2022



China (southern provinces)

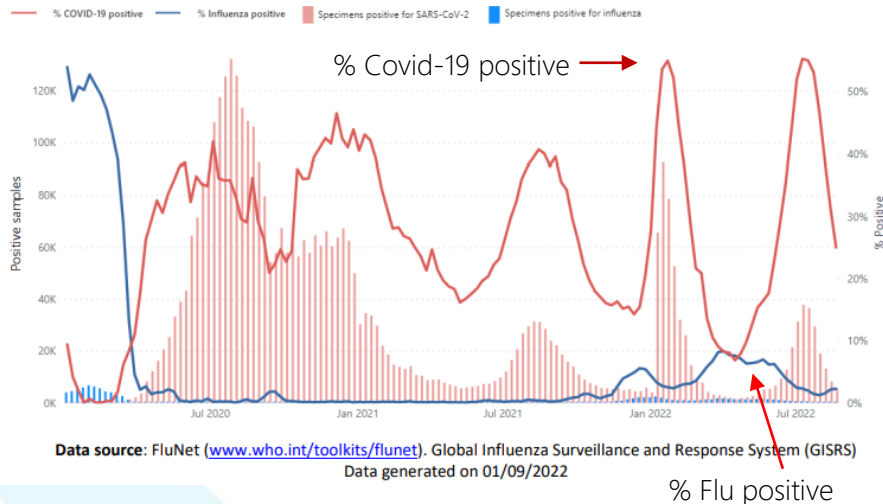


Global influenza activities

- Global influenza activity has been suppressed since COVID-19 pandemic
- However, resurgence of influenza activity started to occur in 2022

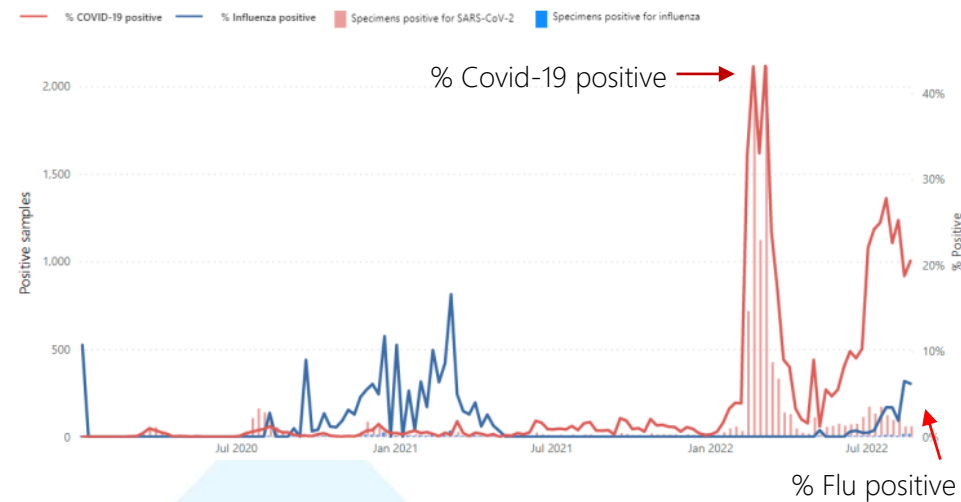
Global

Influenza and SARS-CoV-2 virus detections from sentinel surveillance reported to FluNet globally



WHO Western Pacific Region

Influenza and SARS-CoV-2 virus detections from sentinel surveillance reported to FluNet from countries, areas and territories in the WHO Western Pacific Region



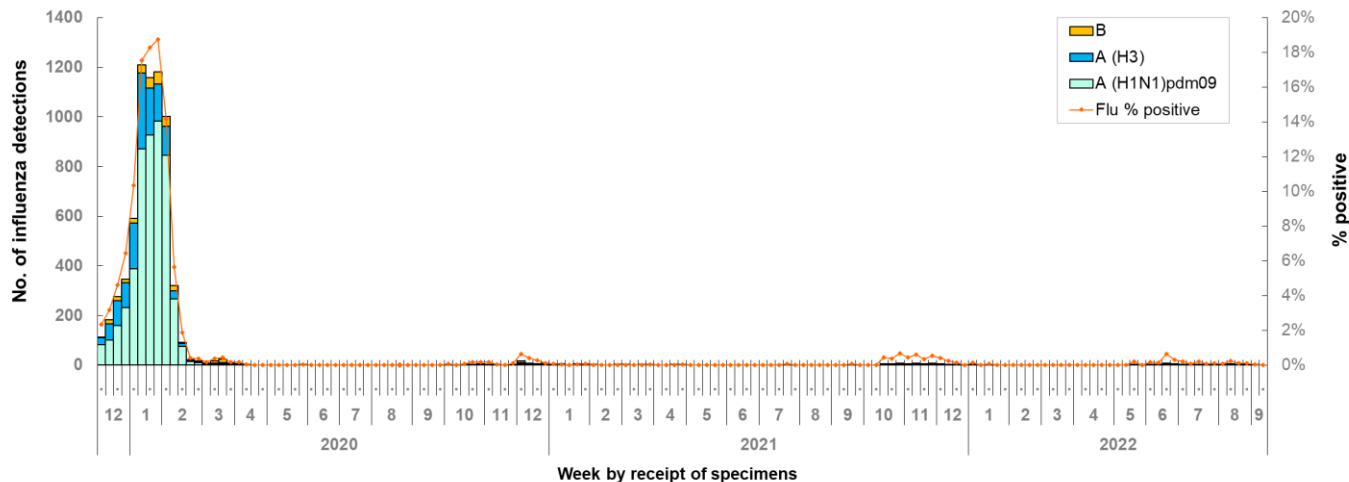
Increased population susceptibility

Behavioural and environmental interventions in response to COVID-19 pandemic (such as social distancing measures)

Very low levels of influenza activity since the end of mild influenza season in 2019/20
-> **Lower levels of immunity than usually seen**

Increasing no. of **infants and young children** who have **never been exposed to influenza**
-> higher infection levels might be expected in these younger age groups

<https://acmedsci.ac.uk/file-download/4747802>



Very low no. of flu detections in HK since end of 2019/20 winter flu season

Summary

- Possible resurgence of influenza in coming season *due to easing measures for COVID-19*
- Increased population susceptibility
- Importance of increase in *uptake of flu vaccine*, especially in children and high risk groups, together with current programme of COVID-19 vaccination