



InFluNews

The monthly newsletter from the Global Influenza Initiative (GII)

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The co-chairs of the GII: Bruno Lina (*left*) and John Paget

Welcome to the first edition of the Global Influenza Initiative (GII) newsletter, InFluNews. This newsletter aims to share current developments and latest news about influenza and vaccination strategies to support further understanding and awareness of their worldwide impact. Each edition will focus on a specific theme and is guest edited by a member of the GII Steering Committee. This inaugural edition has been edited by the co-chairs, Prof Bruno Lina and Dr John Paget.

The impact of the SARS-CoV-2 pandemic on influenza circulation and implications for vaccination policy implementation in the 2021-2022 northern hemisphere (NH) season

Soon after COVID-19 was declared as a pandemic by the World Health Organisation (WHO) on 11 March, 2020¹ various public health measures or non-pharmaceutical interventions (NPIs) were introduced worldwide to mitigate and control the pandemic, including:

- international and national travel bans
- social distancing
- mask wearing

These NPIs, together with a shift in focus of surveillance activities towards the COVID-19 pandemic, initially led to reduced influenza surveillance and reporting activities in many countries (Figure 1). NPIs not only slowed down SARS-CoV-2 transmission but also had an immediate impact on global influenza transmission, resulting in decreased influenza activity.^{2,3}

According to the WHO, influenza activity decreased sharply from mid-March 2020 and has remained low in many countries and regions.⁴ Between September 2020 and January 2021, record-low levels of influenza detections were reported and fewer viruses were available for characterisation than in previous years.²

FOCUS THIS MONTH



INFLUENZA CIRCULATION

How has the COVID-19 pandemic affected influenza circulation?

InFluUPDATE

WHO selects vaccine strains for the NH 2021-2022 season



Figure 1-Surveillance data on influenza and COVID-19 notifications and measures implemented at national sentinel hospitals, Australia, shows a sharp decline in influenza activity right after implementation of COVID-19 control measures as at 30 September 20:

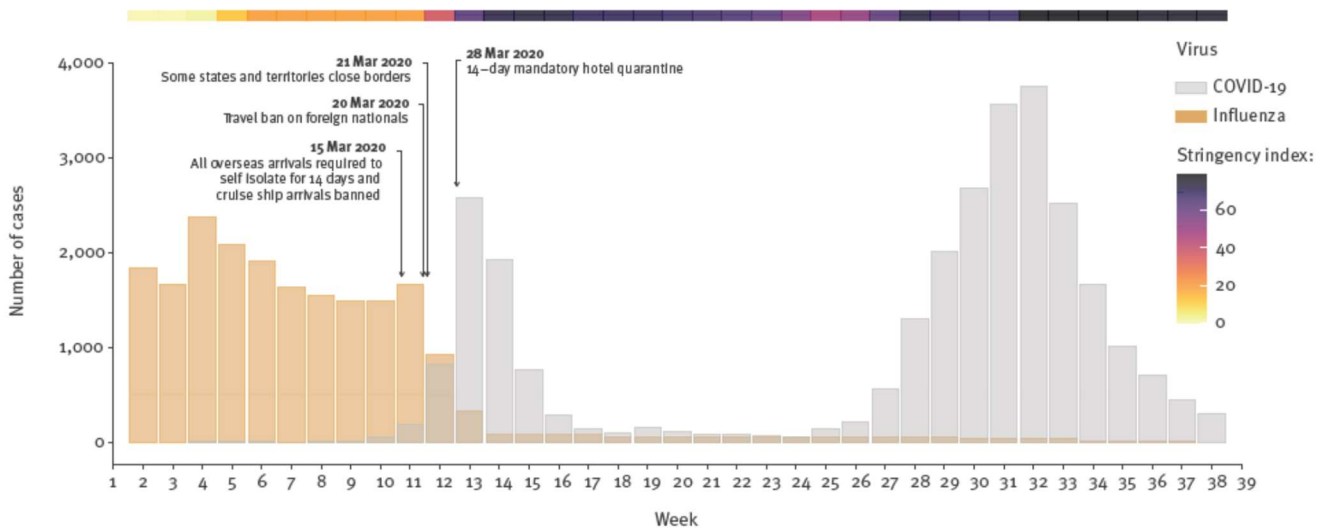


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This is reflected in the number of reported cases of influenza-like illness (ILI) from both hemispheres:⁵

<p>98% decrease in influenza activity in the US (percentage of submitted specimens testing positive 17 May - 8 Aug '20)</p>	<p>12 of 21,178 specimens tested positive in Chile</p>	<p>In South Africa, 6 of 2,098 specimens were positive for influenza</p>
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Number of respiratory specimens tested and percentage testing positive for influenza, by year: 2016-17 through 2019-20 seasons: United States⁵

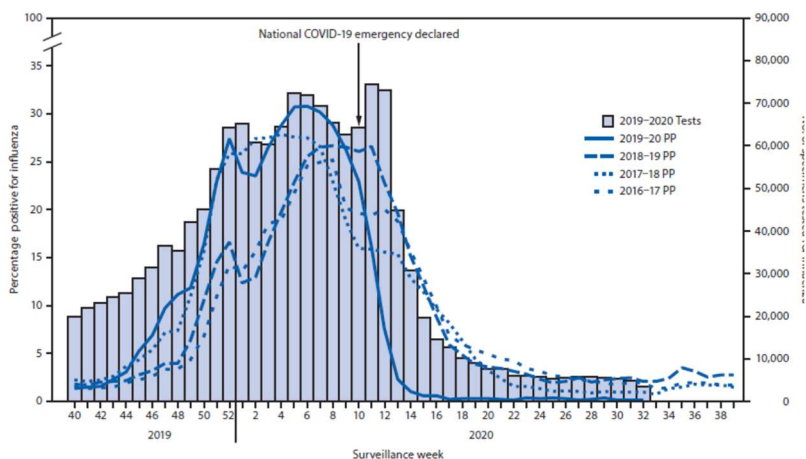
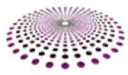


Figure reproduced from Olsen SJ et al. MMWR 2020 69(37):1305-1309.⁵

The initial expectation in the NH was that influenza would cause epidemics as usual, leading to a potential 'twindemic' in 2020-2021. However, the WHO FluNet data and national surveillance data indicate that influenza has, as yet, remained at "inter-seasonal" threshold levels, although influenza activity data (at late November 2020) were reported from some countries with a tropical climate: Bangladesh, Cambodia and Ivory Coast.³

This situation is unprecedented and has raised questions regarding the forthcoming (2021-2022) NH influenza season. Experts have voiced concern that low levels of population immunity to other pathogens, such as influenza, during the COVID-19 pandemic may lead to outbreaks of non-COVID-19 infections as NPIs are lifted, recommending that healthcare systems may need to prepare for this.⁶ Dr Susan Hopkins of Public Health England recently stated: "I think we have to prepare for a hard winter, not only with coronavirus, but we've had a year of almost no respiratory viruses of any other type. And that means, potentially the population immunity to that is less".⁷



There has also been speculation as to how low influenza circulation will impact the selection of influenza vaccine strains for next season. In the following section we provide an overview of the WHO influenza vaccine strain selection process for the NH 2021-2022 influenza season.

InFluUpdate: WHO selects vaccine strains for NH 2021-2022 influenza season

On 26 February 2021, the WHO held its annual consultation regarding recommended strains for the NH influenza vaccine. The selection process was quite challenging because of the limited set of data available due to the very low circulation of viruses in a context where evolution was nonetheless observed.

Between September 2020 and January 2021, influenza A(H1N1)pdm09, A(H3N2) and influenza B viruses circulated in very low numbers and the relative proportions of the viruses circulating varied among reporting countries:²

- In Europe, there were only sporadic detections of influenza A or B viruses
- In North America, the majority of detections were influenza B
- In Asia, influenza A and B viruses were detected in most reporting countries with a predominance of influenza B viruses in Afghanistan, China, the Islamic Republic of Iran and Saudi Arabia. Only influenza A viruses were reported in the Democratic People's Republic of Korea. Japan reported a small outbreak of A(H3N2)

Overall, the percent positivity for influenza viruses in all specimens tested during this period was less than 0.2%. In contrast, the average percent positivity during the same reporting period of the three previous seasons (2017-2020) was 17%.²

The WHO cautions that the impact of the current low virus circulation on influenza activity in the coming seasons is currently unknown. It is, therefore, imperative to maintain continuous global influenza surveillance.^{4,8}

GII co-chair Prof Bruno Lina comments:

"The lack of significant circulation of influenza viruses in the NH does not mean that the viruses disappeared. Influenza was detected in sporadic cases, and some countries experienced a real epidemic. In this context, we should anticipate the possibility of an unusual epidemic next winter, because of some unknown factors related to the impact on the evolution of the virus and on the immune background. Will the absence of virus circulation induce waning of herd immunity? Will this absence of circulation lead to viral stability? These are open questions with many possible answers. Surveillance will help to provide an early response to these difficult questions. We must never forget that we have to expect the unexpected from influenza viruses."

GII summary statement

COVID-19 control measures have dramatically reduced the circulation of influenza virus in many countries over the past year, with WHO reporting record low levels of influenza detection and few virus samples available for characterization. As a result, WHO made recommendations for the NH 2021-22 influenza vaccine strains based on a greatly reduced pool of influenza-positive specimens in comparison with previous years. Although the full impact of this low circulation remains uncertain, the possibility of unusual and more severe epidemics in future seasons exists.



About the GII

The GII is a global expert scientific forum that includes international scientists, researchers, and clinicians with expertise in epidemiology, virology, infectious diseases, immunology, health economics, public health, primary care, paediatrics, and geriatrics.

The GII receives financial support from Sanofi Pasteur which covers the involvement of Ogilvy Health, a medical communications agency who act as secretariat for the GII as well as coordinating logistics for the annual meeting, managing other GII projects and offering strategic counsel.

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