

Reduced flu activity during the COVID-19 pandemic.

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Abstract

After the pandemic extent of SARS-CoV-2 infection was recognized in mid-February 2020, indicators of influenza activity began to decline worldwide.

The significant reduction in influenza activity may have implications in terms of forecasting the most appropriate strains towards which to direct the 2021/2022 vaccination campaign, its possible benefits against the inevitable costs, not only economic, but also organizational. The latter deserve special attention by virtue of the realistic need for a new mass vaccination for Covid19 in autumn 2021.

In order to have a better perception of the fluctuation of influenza activity at the level of General Practice, we verified the cases of influenza diagnosed after hospitalisation for pneumonia and flu-like illness for a period of 5 years in a population belonging to a large GP Surgery in Merseyside, UK.

After the recognition of the pandemic extent of SARS-CoV-2 infection in mid-February 2020, indicators of flu activity began to decrease in the northern hemisphere. These changes have been attributed, both to artifacts due to the decline in the search for influenza pathology, a notion to be taken with extreme caution, and to real changes in the circulation of the flu virus due to the widespread implementation of measures to mitigate the transmission of SARS-CoV-2.

The significant reduction of the flu activity may have implications in terms of forecasting the most appropriate strains towards to which addressing the vaccination campaign 2021/2022, its eventual benefits against the unavoidable costs, which will be not only economical, but also organizational bearing in mind the realist need to have to proceed with a new mass vaccination for Covid19 in Autumn 2021.

To have a better sense of the fluctuation of flu activity upon a Primary Care point of view at General Practice level, we have audited the cases of influenza diagnosed following hospital admission for pneumonia and flu-like illness over a 5-year period in a practice population of 9490-9750 patients.

The laboratory confirmed influenza infection has decreased sensibly leading to a total annihilation of hospital admissions due to influenza in 2020/2021. (Figure 1)

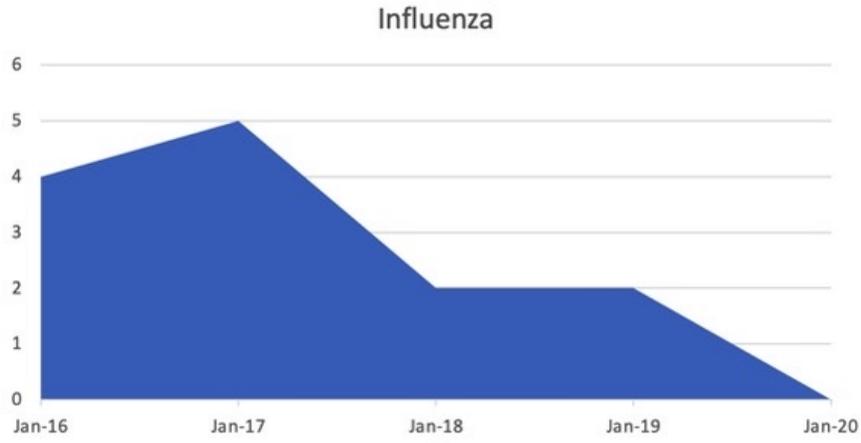


Figure 1: Trend of laboratory confirmed influenza infection.

Flu-like illness, albeit decreased sensibly when compared to the previous years, remained tangible. (Figure 2)

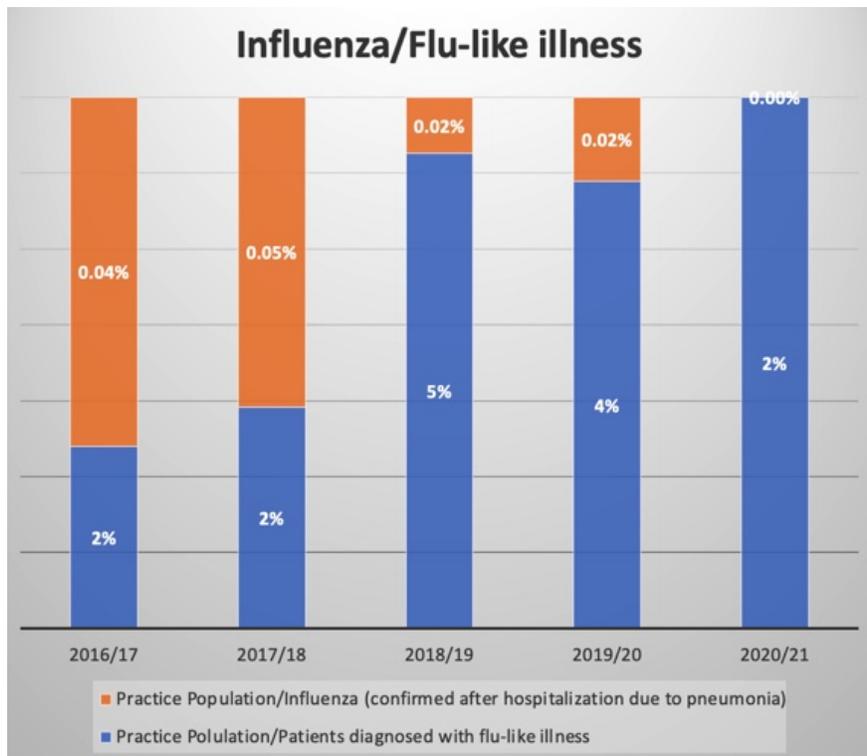


Figure 2: Flu-like illness, albeit decreased sensibly when compared to the previous years, remained tangible.

Yet, it certainly cannot be excluded that some cases may have been due to SARS-CoV-2 infection.

This micro-level experience in one general practice population in UK is not unusual and limited to the United

Kingdom.

In the United States, flu activity (measured by the percentage of respiratory samples submitted for flu tests that gave positive results) began to increase in early November 2019 and >20% of samples were positive during 15 December 2019–7 March 2020, after which activity decreased sharply. In the week of 22 March 2020, when the number of samples tested remained very high, the percentage positivity dropped to 2.3%, and since the week of 5 April 2020, it has remained <1%. The median number of flu-tested specimens each week decreased from 49,696 during 29 September 2019–9 February 2020, to 19,537 during 1 March 2020–16 May 2020, a decrease of 61%. During these same two periods, flu activity decreased by 98% (Lasry et al., 2020).

In the United States, the national COVID-19 emergency was declared on 1 March 2020, but states began implementing a number of COVID-19 mitigation measures in late February, including school closures, mass rally bans, and home stay orders.

Flu data reported to the World Health Organization FluNet platform of three sentinel sites for flu of southern hemisphere for Oceania (Australia), South America (Chile) and southern Africa (South Africa), showed very low flu activity from June to August 2020, the months that make up the typical southern hemisphere flu season. In countries or jurisdictions where extensive COVID-19 pandemic mitigation measures are maintained, such as face masks, social distancing, school closures and remote working, may have little flu circulation during the next northern hemisphere flu season 2020–21 (Cowling et al., 2020) (*Impact of Public Health Interventions on Seasonal Influenza Activity During the COVID-19 Outbreak in Korea*, n.d.) (*Collateral Benefit of COVID-19 Control Measures on Influenza Activity, Taiwan*, n.d.)

It's hard to separate the effect that individual community mitigation measures may have had on flu transmission this season. Although school-age children can guide the spread of influenza, the effectiveness of school closures alone is unclear because adults have other exposures.

Data from the current pandemic could help answer critical questions about the effect of community mitigation measures on flu transmission or other respiratory diseases. Furthermore, the assessment of the acceptability of effective measures would be crucial, as acceptability is likely to be inversely related to the measurement strategy.

In the near future, the 2021–2022 flu vaccination campaign poses several organizational problems since it would seem natural to think that an anti-Covid-19 vaccination campaign of boosters with possible add-up of new strains, must have absolute priority. This is combined with the fact that there are serious doubts about the strain, or strains, against which to target influenza vaccination due to the extremely low circulation of the flu virus in general.

References

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