

## Italian flu season 2020-2021: reasons for the drop and insights for the future

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### Background:

Having seen the trend of 2020 flu season in the Southern hemisphere, the objectives of this study were to describe the trend of 2020-21 flu season in Italy, relating it with containment measures undertaken due to COVID-19, and to provide insights for next flu seasons and prevention of airborne diseases.

### Methods:

We collected data on Italian influenza virological samples on FluNet. We also collected French, German and Spanish data as a comparison. Data on Italian ILI (influenza-like illness) surveillance system were assessed with InluNet. We used the Containment and Health Index of the Oxford COVID-19 Government Response Tracker (OxCGRT) to evaluate the impact of containment measures on Italian ILI incidence (Spearman's correlation).

### Results:

No sample out of 6818 tested positive to influenza virus in Italy in 2020-21 flu season; 21.6% of the samples tested positive to SARS-CoV-2. France, Germany and Spain registered a maximum of 0.10% of positive samples to influenza virus. In Italy the mean of positive samples to influenza virus in seasons from 2015-16 to 2019-20 was 28.8%; the mean number of processed samples in those seasons was 14008. ILI incidence in Italy remained at interseasonal levels during all flu season (mean 1.44/1000; range 0.85-2.04). According to the Containment and Health Index, with increasing containment measures a deflection of ILI incidence in Italy was described ( $p = 0.015$ ).

### Conclusions:

Containment measures, along with rise of seasonal flu vaccination, are the most likely factors to explain the drop in cases in Italian 2020-21 flu season. The reduction of cases in neighbouring countries lower the role of the downsizing of Italian surveillance system seen in 2020-21 compared to seasons from 2015-16 to 2019-20. Rules and conducts may perpetrate the benefit on the decreased disease activity seen in 2020-21 flu season.

### Key messages:

- Containment measures and flu vaccinations are the most impacting factors on the drop of influenza cases in 2020-21 in Italy.
- Though the Italian surveillance system was downsized in 2020-21, the experience of neighbouring countries suggests that the decreased flu activity was factual.