

Letter

Social distancing measures for COVID-19 are changing winter season

Health authorities worldwide have adopted measures of social distancing and movement restrictions, in addition to other public health measures to reduce exposure and to suppress interhuman SARS-CoV-2 transmission. In Italy, a national lockdown with school closure was introduced from March to May 2020. From November 2020, Italy has been divided into zones according to regional epidemiological data, with primary schools reopened, associated with the mandatory use of face masks and different levels of social distance measures. For children with symptoms suggestive of COVID-19, the surveillance mechanism for the control of SARS-CoV-2 infection is based on the performance of a real-time PCR on a nasopharyngeal swab. A diagnostic test has been introduced at the tertiary-level university hospital, Institute for Maternal and Child Health, IRCCS “Burlo Garofolo” of Trieste, consisting of a multiple nucleic acid amplification assay for 13 common viral respiratory pathogens on nasopharyngeal swab (Respiratory Flow Chip assay (Vitro, Sevilla, Spain), including SARS-CoV-2, influenza A and B, adenovirus, other coronaviruses, parainfluenza virus 1–4, enteroviruses, bocavirus, metapneumovirus, respiratory syncytial virus (RSV), rhinoviruses, *Bordetella pertussis*, *Bordetella parapertussis* and *Mycoplasma pneumoniae*. Before routine utilisation, international standard quality control samples for each pathogen were used for test validation, and no cross-detection was found between the different pathogens. Criteria for testing referral did not change during the study period. Weekly variability of the number of total tests performed was due to the normal variations of acute illness. During the last winter season, from September 2020 (week 39) to February 2021 (week 7), 1138 nasopharyngeal swabs were tested for patients younger than 17 years old (figure 1). No influenza A or B nor RSV was detected during this period. The most common pathogen was rhinovirus (n=505), followed by adenoviruses (n=131), other coronaviruses (n=101) and SARS-CoV-2 (n=57). Our data show that common winter pathogens circulation changed, and influenza virus and RSV did not produce a seasonal epidemic in the 2020–2021 winter season. These data suggest that social distancing measures and mask wearing profoundly

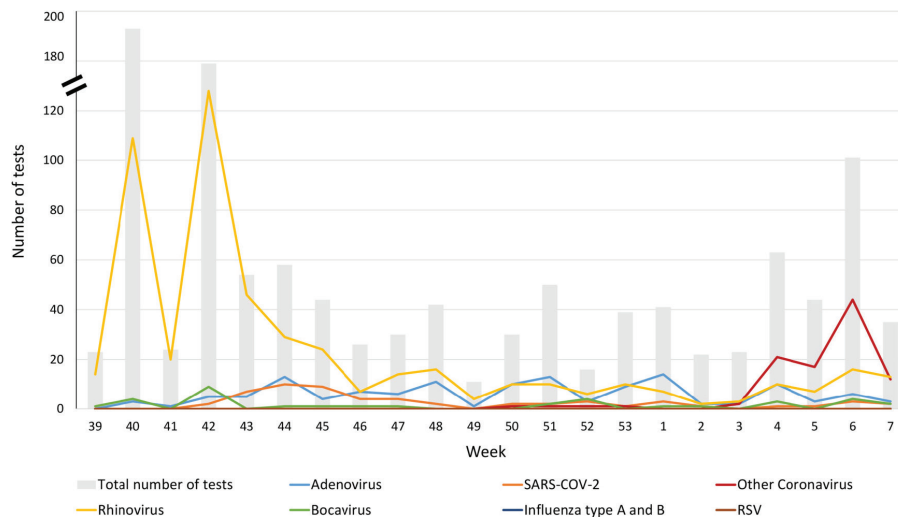


Figure 1 Results of naso-pharyngeal swab for respiratory pathogens. Grey bars represent total number of tests per week.

changed the seasonality of winter paediatric respiratory infections that are mainly spread by respiratory droplets. The reasons why rhinovirus remains the main pathogen despite social distancing and face mask use are still a matter of debate. Similar data showing a decrease of common viral respiratory infections during the winter season have recently been reported in the southern hemisphere.^{1–4} Our data refer to a single institute, covering paediatric population of the Trieste Province (about 230 000 inhabitants), limiting the generalisation of our findings. However, our results highlight the need for continuing surveillance for the delayed spread of such viruses during spring and summer.

Alessandro Amaddeo ¹, **Carolina Cason**,² **Giorgio Cozzi**,¹ **Luca Ronfani**,³ **Manola Comar**²

¹Emergency Department, Institute for Maternal and Child Health—IRCCS Burlo Garofolo, Trieste, Friuli-Venezia Giulia, Italy

²SSD of Advanced Microbiology Diagnosis and Translational Research, Institute for Maternal and Child Health—IRCCS Burlo Garofolo, Trieste, Friuli-Venezia Giulia, Italy

³Clinical Epidemiology and Public Health Research Unit, Institute for Maternal and Child Health—IRCCS Burlo Garofolo, Trieste, Italy

Correspondence to Dr Alessandro Amaddeo, Emergency Department, Institute for Maternal and Child Health—IRCCS Burlo Garofolo, Trieste, Friuli-Venezia Giulia, Italy; alessandro.amaddeo@burlo.trieste.it

Twitter Manola Comar @manola.comar

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ORCID iD

Alessandro Amaddeo <http://orcid.org/0000-0003-2117-0781>

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