

# Coinfection of Influenza Virus and Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2)

## To the Editors:

Coronavirus disease 2019 (CoVID-19) is a new infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which originated from Wuhan in China and has now spread globally. However, despite the concern focused on SARS-CoV-2, influenza virus continues to circulate and cause disease. Here we report a mixed infection. Physicians should be alert that a positive test for influenza does not rule out the possibility of COVID-19 disease.

The SARS-COV-2 outbreak in late December of 2019 in Wuhan, China, has caused many infections and deaths globally. SRAS-COV-2 is a new respiratory tract transmitted disease mainly through respiratory droplet and close contact, aerosol but fecal-oral route is also suspected. As of March 19, 2020, a total of 23,473 cases, and 9840 deaths were reported.<sup>1</sup>

In China, several respiratory viruses are also now active including influenza, parainfluenza virus, respiratory syncytial virus, adenovirus, and now SARS-COV-2. Unfortunately, according to the World Health Organization influenza website,<sup>2</sup> the respiratory illness indicators and influenza activity remained elevated overall in the northern hemisphere which are in a “flu” season. The weekly report of the influenza surveillance reported that the United States now has its highest pneumonia and influenza mortality since 2004, except for the 2009 pandemic.<sup>3</sup> During the SARS pandemic in 2003, Yang et al<sup>4</sup> found that the patients with fever, cough or sore throat had a 5% of influenza virus positive rate, and with SARS infection reportedly increasing at the meantime. This raises the concerns that there might be mixed infections of seasonal influenza and the novel coronavirus. Thus, we do think there might be a

change of mixed infection of the influenza virus and SARS-COV-2. The Chinese experts from China-Japan Friendship Hospital have reported a case coinfection with influenza A virus and SARS-CoV-2.<sup>5</sup> So, in an era when testing for COVID-19 is in short supply in many areas of the world, when patients have a positive test for influenza, one cannot assume that they do not also have SARS-CoV-2 infection. Measures should be taken to enhance the respiratory infectious diseases surveillance systems and screen the people with fever, cough or sore throat for both viruses with oral, nasopharyngeal and anal swabs.

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## SARS-CoV-2 Infection in a Pediatric Department in Milan

### *A Logistic Rather Than a Clinical Emergency*

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## To the Editors:

The number of subjects infected with SARS-Cov-2 is dramatically increasing in Lombardy, Northern Italy, since February 21, 2020, leading to an infection chain that represents the largest coronavirus disease 2019 (CoVID-19) outbreak in Europe to date. Nowadays, few SARS-Cov-2-positive children have been admitted to pediatric departments. In winter season, a huge number of children with acute respiratory failure needs to be hospitalized in pediatric ward/pediatric intensive care units if ventilated. This setting could be very difficult to have clinical criteria aiming to isolate suspected SARS-CoVID-2 children to avoid spreading of infection among health care professionals, other patients and visitors. The aim of this report is to document our experience in facing pediatric CoVID-19 emergency in Milan.

The major issues we are encountering could be summarized as follows:

- To define a univocal definition of pediatric suspected case.
- To avoid a waste of resources.
- To define pediatric isolation areas able to include 1 parent.
- To plan a correct patients' flow, from hospital admission to isolation in proper ward or pediatric intensive care units, limiting the healthcare professionals and other patients' exposure.
- To adapt family-centered care approach allowing a good balance between the presence of one of the child parents during hospital stay and the best intrahospital infection control.
- To develop a procedure to guide decision in removing “low-risk patients” from isolation room in case of imbalance between sources and needs.

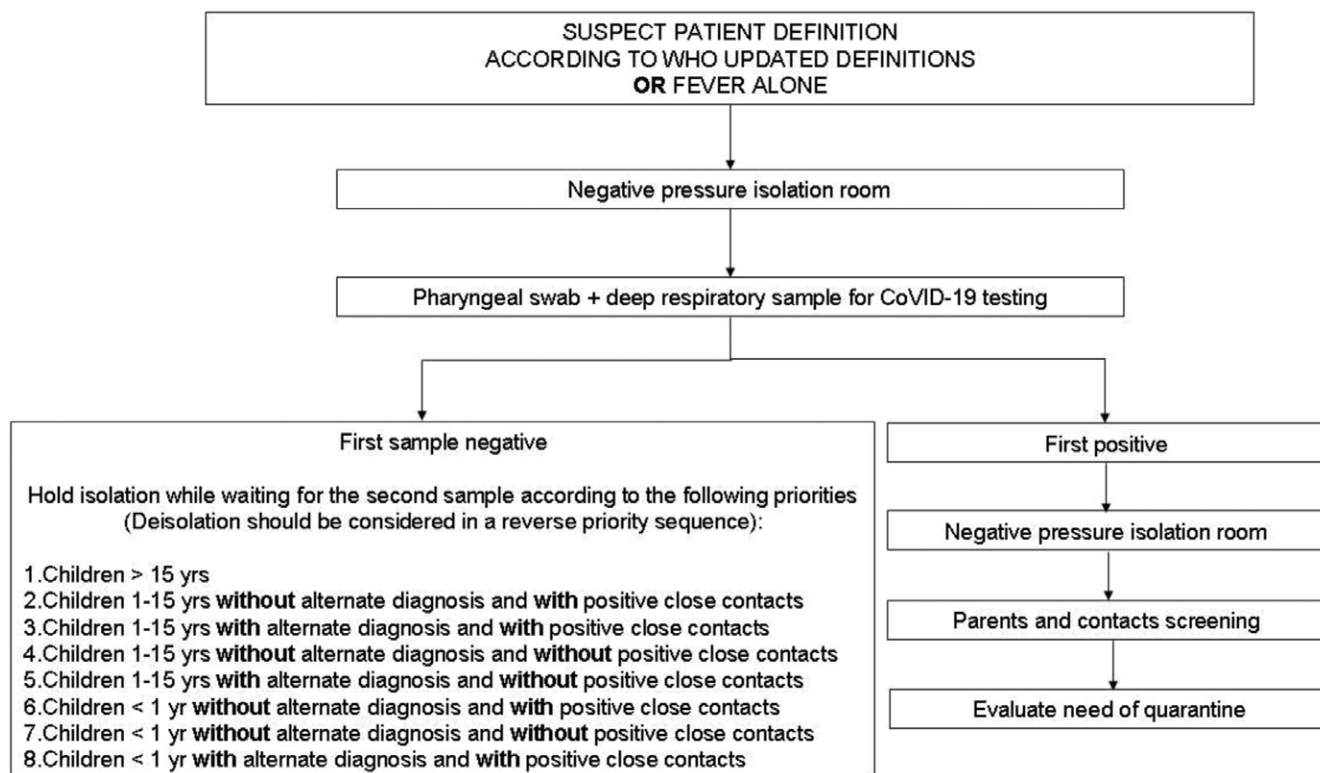
The current World Health Organization (WHO)/ECDC definition of suspected case is not focused on pediatric population. According to WHO/ECDC criteria, suspected cases should be isolated in negative pressure rooms. Deisolation could be considered only after 2 negative respiratory samples. However, the time to laboratory test response lasts more than 48 hours thus leading to a difficult management of patients' flow. The logistic is complicated by the fact that according to national law, 1 parent should stay with the child. Considering the large number of patients referring to pediatric hospital because of acute respiratory infections in winter season, the strict adoption of WHO/ECDC criteria can lead to a congestion of our hospitals. CoVID-19 can

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**FIGURE 1.** Flowchart representing our algorithm supporting decision making on the patients' disposition. The identification of a "suspect patients" depends on WHO-updated definitions or on the presence of fever alone as CoVID-19 in children can occur with very mild symptoms. A suspect case has to be put in isolation room and 2 respiratory samples have to be collected for laboratory testing. If the first sample is positive, then the patients have to be kept isolated. If the first sample is negative and patients' flow is under control, isolation has to be kept until a second sample excludes the infection. Otherwise isolation priority can be defined according to the matrix, giving higher priority to number 1, lowest priority to number 8. The same matrix can be used to deisolate "low-risk patients" in case of need of isolation for higher-risk patients.

occur in febrile children even without signs of respiratory failure. By merging WHO/ECDC and Chinese epidemiology, we have developed an algorithm as decision-making matrix to decide on the patients' disposition (Fig. 1).<sup>1-4</sup>

In conclusion, the pediatric emergency is more logistic than clinical. So, we urge you to plan local advice and follow your institutional and national guidelines.

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## Use of Handheld Transceiver for Hospital Healthcare Workers-Caregiver Communication During the Coronavirus disease 2019 (COVID-19) Outbreak in Pediatric Emergency Department

#### To the Editors:

In December 2019 novel Coronavirus Infection (2019-nCoV) spread in China and subsequently all around the World,

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