Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the editor

Telemedicine for management of paediatric infectious diseases during COVID-19 outbreak

To the Editors,

Since the beginning of the coronavirus disease 2019 (COVID-19) outbreak, the use of telemedicine to manage suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-infected individuals in the community has been suggested [1]. Primary care paediatricians were supposed to have relevant benefits from telemedicine, as rapid access to subspecialists could have solved at least some of the emerging COVID-19-related problems. To verify this hypothesis, a comprehensive paediatric infectious disease telemedicine programme at an urban academic medical centre in Parma, Emilia-Romagna Region, Italy, was developed and activated on March 7, 2020.

The academic hospital was directly connected to all the paediatric ambulatories that systematically followed the children in the community during the year. One paediatric infectious disease specialist coordinated the programme. A total of 36 primary care paediatricians of Parma province who globally follow 30,000 children were enrolled. The service used telemedicine peripheral devices, apps for smartphones and broadband connections. Telemedicine participants could connect for real-time interaction usually during the 4 -h/day period of primary care paediatrician activity in the ambulatory. Evaluations of children generally began with a review of the available information that was discussed and, when possible, associated with a visual assessment of the child's overall appearance, respiratory pattern and behaviour.

From March 7 to May 3, during the lockdown phase, 61 requests of telemedicine consultation (28, 45.9 %, males; mean age ± standard deviation, 4.69 ± 3.22 years) to the paediatric infectious disease specialist in the hospital by the primary care paediatricians were made. A total of 55 (90.2 %) paediatric problems that without telemedicine support could have led the patient to the emergency room of the hospital were solved in the community: 30 (54.5 %) children with fever of unknown origin, 20 (36.4 %) with skin rash, 3 (5.5 %) with suspected primary immunodeficiency and 2 (3.6 %) with acrocyanosis. In 6 out of 61 cases (9.8 %), a medical visit was required because of skin rash (n = 4, 66.7 %) and acrocyanosis (n = 2, 33.3 %): in these cases nasopharyngeal swab was performed and resulted negative for SARS-CoV-2 using real-time polymerase chain reaction. None of the children needed further medical evaluation either in the community or in the hospital.

This experience shows that during the COVID-19 outbreak, the use of telemedicine for the management of paediatric infectious diseases permitted us to avoid hospital access in 90 % of the cases, favouring reduction of the pressure on the hospitals. During the present COVID-19 pandemic, telemedicine use has been promoted in some countries [2–4]. However, in the majority of the countries, despite a very large burden of COVID-19, telemedicine was not included in the essential level of care granted by the National Health System [5]. Our experience shows that telemedicine may be an easy and effective measure to solve many paediatric problems in the community during COVID-19 outbreak, reducing emergency room visits. The activation of integrated software that can be used by paediatricians and parents from their mobile phone with the possibility to perform virtual visits and daily monitoring at home of patients with acute infections with respect to privacy law is advisable.

Declaration of Competing Interest

None.

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