

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, becoming a public health emergency. In Italy, first cases are reported from February 2020 and since then the virus has spread quickly in all regions. On 11th March, World Health Organization has declared Coronavirus disease 2019 (COVID-19) outbreak. Coronavirus belongs to the *Coronaviridae* family, *Nidovirales* order, and the 2019-nCoV belongs to the β -coronavirus genus.¹ Nowadays the elderly and those with underlying chronic diseases are more likely to become severe cases. Thus far, all pediatric cases in China with laboratory-confirmed 2019-nCoV infection were mild cases, and no deaths had been reported.²

The transmission of the 2019-nCoV infection happened through the respiratory droplets by infected patients, but coronavirus can also be transmitted by contact with contaminated objects, such as phones, toys and doorknobs³; however, also asymptomatic cases play a critical role in the transmission process.

Children are considered suspected if they presented fever, cough, breathing difficulties, gastrointestinal symptoms or are related with a cluster outbreak or close contact with 2019-nCoV infected/suspected cases.

All pediatric suspected cases are isolated with only one parent in special single

rooms set up for sanitary emergency. It is increasingly necessary to clean and disinfect the articles used by little patients and their caregivers.²

Besides various types of personal protective equipment (PPE) are recommended and used by hospital healthcare workers (HCWs) to protect from infection, including high-filtration medical masks such as FFP2 or FFP3, gloves, gowns, goggles and face shield. The protective equipment is disposable, and for each patient, it is necessary to don and doff them about 5–6 times a day. The estimated average donning time according to the correct procedures is 3–4 minutes, while the doffing time is about 1–2 minutes; however, the doffing phase is the most dangerous because of the risk of contamination. It has been reported that about 15% of all HCWs become infected by COVID-19 after 10 days of work in emergency department (ED), due to the contact with the patients.

In this period, there is enormous demands for PPE, especially medical masks, used not only by HCWs but also by all community. Therefore, on one side it is important to reduce any unnecessary potential exposure to infection, but on the other we must keep in mind the importance of communication with patients and their caregivers, especially in a pediatric setting.

It is interesting to take inspiration from telemedicine, which uses a lot of audio-video technologies to improve patient health by facilitating interactions between patients and clinicians or between 2 or more clinicians.⁴ Our hospital tried to adapt to COVID-19 health emergency in a short time. So, some dedicated rooms to lockdown infected children, without an interphone or telemetry system, were set up, cameras were positioned inside, and handheld transceivers (HTs) were given to the parents for communication with the HCWs. HTs let these interactions be synchronous, wherein parties engage in real-time, 2-way communication, without any delay of time.

In this way, we significantly reduced the number of clinical evaluations carried out on the patient and therefore the use of PPE, reducing exposure to potential infectious sources. We believe that HT can be a useful tool both to save PPE and also to protect HCWs during COVID-19 outbreak.

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