

# New clinical needs and strategies for care in children with neurodisability during COVID-19

Elisa Fazzi, Jessica Galli

Child and Adolescence Neurology and Psychiatry Unit, Department of Clinical and Experimental Sciences, ASST Spedali Civili di Brescia, University of Brescia, Brescia, Italy.

Correspondence to: elisa.fazzi@unibs.it

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Like most of the world, paediatric neurology and psychiatry services in Italy are facing a nationwide emergency due to the coronavirus disease 19 (COVID-19) pandemic. The impact of the COVID-19 outbreak in Lombardy (a region in the North of Italy) has been particularly dramatic. We would like to share our first-hand experience of the challenges we have faced and our attempt to remodel care delivery strategy in response.

Social distancing has been adopted as the principle precautionary measure to prevent the spread of infection. This strategy may not be easily achievable for carers of children and adolescents with neurodisabilities and/or psychiatric disorders, who need daily assistance and therapy. Children's clinical services and social activities have been disrupted with the closures of medical centres, schools, and caregiving agencies. Paediatric patients can present as asymptomatic or with only mild/moderate symptoms of COVID-19.<sup>1</sup> Therefore, children with neurodisabilities face additional challenges as the result of their functional limitation and changes to their daily routine.<sup>2</sup> This situation adds further stress to parents already worried about infection. Traumatic life events, such as a pandemic, can intensify experiences of stigma and discrimination. Maximizing communication is a priority when it comes to the mental health of quarantined children. It is key to support the 'virtual' relationship between medical staff and patients and their families, especially when isolation or quarantine is the primary protective strategy<sup>3</sup> (<https://www.sinpia.eu/news-anno-2020/indicazioni-operative-per-i-servizi-di-npia-e-di-riabilitazione-dell'eta-evolutiva/>). It is vital to employ all the technology available (phone, texting, email, video conferencing, etc.).

In our unit, we have developed a strategy which provides continuity in care and treatment, while also addressing the potential mental health problems that might arise in children with neurodisabilities in lockdown or quarantine

during the COVID-19 pandemic. There are four major strains to our strategy.

Telehealth encompasses telerehabilitation, telecare, teleconsultation, telemedicine, and remote nonclinical services. It involves the use of various information and communication technologies to provide medical assistance, outside the traditional face-to-face approach, from the hospital to patients' homes. It has become a valuable option, especially for rehabilitation purposes. Telerehabilitation seems to be an effective, flexible, and individualized intervention, making significant saving on costs. Patients reported a high level of satisfaction, reinforcing the hypothesis that the rehabilitative services at a distance is a feasible alternative to routine care. So far, it has been used in different conditions, but may provide a valuable approach in patients with neurological disorders, including children with cerebral palsy.<sup>4</sup>

The COVID-19 pandemic has been demonstrated to exert a psychological impact, including high levels of stress, anxiety, and depression in disabled children and their families.<sup>5</sup> Call centres offer psychological and psychiatric support both for children and their families during the pandemic. Historically, call centers refer to the use of mobile communication devices to promote public health (conducting telephone surveys on patient satisfaction to measure population health or disease management, etc.). Nowadays, we use them to offer immediate psychological counselling to homebound patients. They can be extended to a greater number of participants because they have low-cost infrastructure and do not need an internet connection.

Telehealth and call centres both implement 'smart working' (<https://www.lavoro.gov.it/strumenti-e-servizi/smart-working/Pagine/default.aspx>), a useful strategy for reducing the risk of virus spread. It is a flexible approach to managing the workplace and timetables, which allow people to attain greater professional efficiency. The application of smart working has been promoted by public authorities to protect the population from risk of contagion, especially vulnerable people and health care providers.

The application of innovative communication technologies during the pandemic may turn into a useful tool in the future, after COVID-19, for daily clinical practice and treatment of children with neurodisabilities.

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