



*Pediatric Endocrine Trainees Section (Open-Forum)*

## Endocrine services for children disrupted by COVID-19 – A fellow’s perspective

Jayati Joshipura Jhala

Department of Pediatric Endocrinology, Indira Gandhi Institute of Child Health, Bengaluru, Karnataka, India.



**\*Corresponding author:**

Jayati Joshipura Jhala,  
Department of Pediatric  
Endocrinology, Indira Gandhi  
Institute of Child Health,  
Bengaluru, Karnataka, India.

[jsjoshipura@gmail.com](mailto:jsjoshipura@gmail.com)

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### ABSTRACT

The COVID-19 pandemic has been disrupting our lives for the past 2 years. During my tenure as a fellow in pediatric endocrinology at a tertiary care center in India from September 2020, we faced several challenges in managing chronic endocrine disorders especially type 1 diabetes mellitus. However, with time, and the availability of newer methods of communication technology and supportive services, it became possible to adapt to a “new normal.”

**Keywords:** COVID-19, Pediatric endocrinology fellowship, Type 1 diabetes mellitus

Pediatric endocrinology has always been my first love. Since my early residency days, I had dreamt of pursuing a career in pediatric endocrinology, and I was fortunate to get an opportunity to fulfill this dream at one of the best institutions in India — Indira Gandhi Institute of Child Health (IGICH), Bengaluru. However, the adage “Life is full of uncertainties” was proven again with the ongoing pandemic of “COVID-19” disrupting our lives and career for the past 2 years.<sup>[1]</sup>

The fear of COVID-19 infection was at its peak when I joined my fellowship at IGICH in September 2020. There were mixed feelings of excitement and anxiety on everyone’s masked faces. The outpatient department (OPD) had just begun functioning after being closed for a gap of almost 6 months, to our utter relief. Although the number of patients attending the OPD was far less than before, we were excited to learn and understand the nuances of one of the most complex systems of the human body, the endocrine system from our teachers and colleagues.

As days and weeks passed, our OPD and indoor patient numbers increased. With the gradual easing of lockdown and restrictions, the patient numbers reached those of pre-COVID times, with many patients coming for follow-up after a gap of a few months. This was when we realized that COVID-19 infection was not only causing havoc by inducing severe acute respiratory infections, but it had multiple other indirect far-reaching consequences.<sup>[2]</sup> Endocrine disorders, though treatable in most cases, require close follow-up and evaluation, failing which they can worsen and have a long-term adverse impact on the body organs and systems and can even create life-threatening situations. In addition to the “on again” and “off again” lockdown and travel restrictions, the fear of contracting COVID-19, especially with the new variants of concern, decreased hospital visits by patients who were otherwise regular with their follow-up. There were financial implications to the treatment and follow-up. For example, many children with osteogenesis imperfecta were benefiting from the 3 to 6-monthly free bisphosphonate therapy

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that our institute was providing for them with the help of a charity organization, missed out on more than a few doses. Many pediatric endocrine disorders require a continuous supply of medications. The medications are life-sustaining in some conditions (e.g., insulin and hydrocortisone) and though not essential, equally important in preserving normal growth and puberty in others (e.g., recombinant growth hormone and thyroxine). As supply chains got interrupted repeatedly, many children faced disruptions in their treatment, especially during the initial few months of the pandemic. Fortunately, this settled in a few months as healthcare facilities, pharmacies, pharmaceuticals companies, and the parents figured out the contingency plans.

One of the most common disorders in pediatric endocrinology OPD is type 1 diabetes mellitus (T1D). We have more than 450 children with T1D on regular follow-up, and around 200 of these are registered under the “Changing Diabetes in Children” (CDiC) program. Under the CDiC, these children were being provided with free insulin and syringes at regular intervals.<sup>[3]</sup> During the first lockdown, when the country came to a complete standstill, the T1D follow-up got affected. The worsened glycemic control that we noticed when the CDiC follow-up resumed could have been due to the rationing of the limited supplies (e.g., insulin and glucostrips) by the families. As playgrounds and schools shut down for extended periods, children’s daily physical activity levels dropped drastically. This might have contributed to the increased weight gain and increased insulin requirement noticed in many of our kids with T1D during the latter half of 2020 through 2021.<sup>[4]</sup> although it remains an ongoing debate whether COVID-19 has any direct effect on the occurrence of T1D, the pandemic had surely disrupted the glycemic control of our children with T1D.<sup>[5,6]</sup>

It is rightly said that “necessity is the mother of invention.” We, at IGICH, like many other medical professionals around the world, took this adverse situation as a challenge and tried to compensate for the lost follow-up of the patients with diabetes and endocrine disorders. Technology came to our help. All the patients and their caregivers were given a dedicated departmental mobile phone contact so that they can reach out to us regarding any problems they had faced or queries on management. This complimentary telephonic advice was available 24-h a day and 7 days a week for emergencies. Children with T1D were given guidance regularly regarding adjusting insulin dose to achieve reasonably good glycemic control.

This 24-h access to healthcare was one of our ways of observing the theme of “World Diabetes Day (WDD) – Access to Diabetes Care.” The celebration of WDD is something that the diabetic children looked forward to in the past. During the WDD celebrations every year, children used to receive a lot of gifts and were entertained with cultural programs, in which, they actively participated and provided

educational activities. Well, we could not disappoint the kids! The WDD celebration ritual in 2021 was continued as an online program with the help of the virtual meeting platform, Zoom. We arranged an online entertainment like a puppet show, a discourse with nutritionists about various aspects of diet and nutrition, lectures by experts and various cultural and entertainment programs. To our delight, children both young and old also participated enthusiastically in these cultural and amusement activities. Life had thus returned to a “new normal” not just for the adults but also for the kids.

“Change is the only constant in life.” Life had just started normalizing as the pandemic showed signs of decline with patients returning to routine follow-up. However, COVID-19 had different plans. It had multiple peaks again during May 2021 and January 2022. Although I saw many peaks of COVID-19 during my fellowship, the only thing that did not have a “peak” and a “trough” was the learning during the fellowship program. The process of learning was uninterrupted, even in the presence of the deadliest virus. The COVID-19 pandemic had provided us the fellows and students with a few perks in the form of online webinars and lectures. In pre-COVID times, the financial and time constraints would have restricted us from attending many national and international conferences. However, COVID-19 brought all these conferences to our laptop screens. With many important conferences resorting to virtual or hybrid modes, we had the privilege of attending lectures and webinars by internationally renowned faculties at the click of a mouse button. At the same time, we missed out on travelling to these conference destinations, making friends with our colleagues from other institutes, and taking guidance from the consultants at the physical conferences. I hope that these hybrid conferences (online and offline) will continue even after the pandemic subsides for our continued learning.

Based on the experience of the past 2 years, it is almost certain that COVID-19 is not going anywhere soon. However, every cloud has a silver lining. The Government of India has started vaccinating adolescents against COVID-19 and might soon extend it to the younger kids as well. Schools have started reopening, and normalcy is beginning to be reestablished. However, we cannot let our guard down. It might become necessary to adapt and innovate new ways and methods to cope with it. We must ensure that patient care of non-COVID patients is not compromised, as these could have life-long devastating consequences. Chronic conditions such as endocrine disorders require utmost care and attention. Newer methods of teleconsultation must continue to ensure regular follow-ups.

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#### Declaration of patient consent

Patients' consent not required as there are no patients in this study.

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#### Conflicts of interest

There are no conflicts of interest.

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