



## Paediatric Clinic and Challenges Posed by Covid Pandemic. A Mini Review

Muhammad Zarak Sarwar<sup>1</sup>, Keron Akintola Ayodele Blair<sup>2</sup>, Syed Sami Iqbal Ahmed<sup>3</sup>, Muhammad Muneeb Arshad<sup>4</sup>, Adeniyi Kayode<sup>5</sup>, Tetiana Medvid<sup>6</sup>, Angela Ishak<sup>7</sup>, Maureen Ezechukwu<sup>8</sup>, Nadeem Iqbal\*

1. Muhammad Zarak Sarwar, Shifa College of Medicine, Pakistan.
2. Keron Akintola Ayodele Blair, American International School of Medicine, Georgetown Guyana.
3. Syed Sami Iqbal Ahmed, Shifa College of Medicine, Pakistan.
4. Muhammad Muneeb Arshad, Shifa College of medicine, Pakistan
5. Adeniyi Kayode, Obafemi Awolowo University, Nigeria.
6. Tetiana Medvid, Danylo Halytsky Lviv, National Medical University, Ukraine.
7. Angela Ishak, European University Cyprus-School of Medicine.
8. Maureen Ezechukwu, Windsor University School of Medicine, St Kitts
9. Nadeem Iqbal, PKLI, Lahore.

**Corresponding Author: Nadeem Iqbal**, Dept of Urology and Kidney Transplant, Pakistan Kidney and Liver Institute Lahore, Pakistan.

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**Abstract**

*COVID-19, which resulted from the spread of coronavirus SARS-Cov-2, had a profound impact on the delivery of health care to people in the last two years. It affected the efficiency of the health care system and financial activities alike across the world. This pandemic has concomitantly created hurdles in the care of adults and young patients alike. The COVID-19 pandemic also brought intense psychological pressure on families. This, together with the global lockdowns by various governments resulted in the suspension of commercial activities and provision of services, the closure of schools, the restrictions on gatherings of groups of people in public places, and the travel restrictions all led to an unexpected scenario in pediatric health care. To address these concerns, pediatric medicine and surgical providers rapidly adopted and implemented telemedicine facilitation into their clinical practice. We aimed to review the importance of telehealth in pediatric clinics, to alleviate the anxieties of parents of children in the COVID-19 pandemic.*

**Keywords:** COVID-19, Pediatric, Telehealth, patient, pandemic, and telemedicine clinic.

**Introduction:**

COVID-19, which resulted from the spread of coronavirus SARS-Cov-2, had a paramount impact on the delivery of health care to people in the last two years. Following this, disruption came in daily life. It affected the efficiency of the health care system and financial activities alike across the world [1-3]. There has been a constant struggle on part of the hospitals' management teams to devise pathways to cope with immense pressures of the need for continuity of medical supplies and health care staff in the face of such an unpredictable situation. This pandemic has concomitantly created hurdles in the care of adults and young patients alike. The COVID-19 pandemic also brought intense psychological pressure on families [4-6]. This, together with the global lockdowns by various governments resulted in the suspension of commercial activities and provision of services, the closure of schools, the restrictions on gatherings of groups of people in public places, and the travel restrictions all led to an unexpected scenario in pediatric health care. To address these concerns, pediatric medicine and surgical providers rapidly adopted and implemented telemedicine facilitation into their clinical practice [7-10]. Telemedicine has been successfully adopted in different subspecialties such as anesthesiology, cardiology, critical care, dermatology, oncology, psychiatry, and radiology [11]. In the pandemic situation, it is of paramount importance to lessen face-to-face elective outpatient clinic visits in pediatric patients. As a result of the social distancing practices, the interest in the development of telehealth

services has accelerated. We are of the view that such technology as telehealth can be of use in pediatric clinics, to alleviate the anxieties of parents of the children in the COVID-19 pandemic.

### **Methods**

We did a search on PubMed, Medline database publications using: COVID-19, Pediatric clinics, Telehealth, patient, pandemic, and telemedicine clinic. The publications included were special communications, reviews, conferences papers, books and research studies regarding the subject matter over the last 24 months.

### **Discussion**

Telehealth has helped during the lockdowns in adult clinics, however, literature regarding its utilization in pediatric clinics has not been much discussed. In the pandemic situation, the strengths and potential weaknesses of telemedicine have been rigorously scrutinized. In this pandemic era, the practice of telehealth in pediatric clinics can be of enormous help in areas such as history taking, basic physical examination, and communication of other basic investigations such as chest X-ray, and ultrasound, which can facilitate in formulating treatment plans [12-14]. Some studies have outlined the potential role of telemedicine for the extension of pediatric clinical services to distant areas without a need for an on-site pediatric consultant. It is believed that such measures can be particularly helpful for improved access to patients living in financially poor and distant rural areas [13-14].

It has been found that the fear of contracting COVID-19 infection results in delayed access to pediatric emergency facilities, which can have potentially harmful effects on the children's health during the current COVID situation [15-17]. In one such study, at a children's hospital in Italy, there was a 76% reduction in the number of admissions to the pediatric accident and emergency department during March 2020 as compared to the corresponding time frame of the previous year. They observed a significant reduction of the percentage of patients admitted for trivial issues (insignificant A&E triages), however, the decrease was mild for the patients who were admitted for serious conditions (i.e. green and yellow codes, respectively).

In children, infectious diseases comprise the majority of the conditions requiring frequent admissions for medical treatment [18]. Hence, during lockdowns, the isolation of the pediatric population away from places of social gatherings (parks, markets and play areas) resulted in the reduction of contacts and spread of infectious diseases. Additionally, the social restrictions mitigated the likelihood of encountering traumas (road traffic accidents, school injuries, and sports injuries). However, a note of caution is needed here as the general public felt discouraged in terms of accessing hospitals even when

urgent medical intervention would be mandatory, resulting in greater morbidity of the patient's ailments at the time of accident and emergency admissions. Similar things had been observed in the adult population as well [17-19]. In childrens' cases infections, and serious traumas had almost disappeared in hospitals. However, serious diseases and dangerous diagnostic delays at admission have also been observed due to the thinking pattern of parents in lockdowns. During the lockdowns, children were more likely to be admitted to the emergency department in precarious conditions, often in need of immediate emergency surgery, ICU care or urgency of transfusions. Parents' fear and delay tactics in seeking pediatricians' assistance during the lockdowns in the COVID-19 era resulted from such aforementioned issues [18-20].

In this pandemic situation, telemedicine may be used as a valid alternative for a primary evaluation of certain conditions. However, this new modality should be utilized with extreme caution, as the physical examination might not be possible with telemedicine. At the same time, it is important to educate and motivate parents to interact with medical staff without fear of COVID-19 and thus should avoid unnecessary delay for the best interest of their child's health [20-21].

In one series of cases, it was found that all cases of late diagnosis of appendicitis ended up in complications that could have been averted had they been diagnosed in time. Cases were delayed by parents, out of fear of contracting COVID-19 in hospital setups. On the other hand, it is pertinent to reiterate the need for a precise and comprehensive physical examination and evaluation by the physicians to reach a correct diagnosis in children suspected of having any surgical condition. There should be a pragmatic approach where a balance is achieved between measures designed to minimize the viral spread and the appropriate care of children who are in need of timely medical assessment [21-23].

Despite being an inappropriate option, telemedicine can help physicians with triaging and child evaluation if a parent is calling from home with concerns regarding the child's health. Video calls can help with a rapid assessment of children's conditions that may help guide the physician in deciding to see a patient in the outpatient clinic in several hours or days. If a child's condition deteriorates and requires emergency care, the child can be referred and guided to present to the nearest medical center, or mobilize emergency medical services in an appropriate way [22-25].

### **Conclusion:**

The COVID-19 pandemic has presented hurdles to the timely provision of assistance to children during the lockdowns. It is a responsibility on part of the policymakers, and health care providers to create an encouraging environment for the provision of swift clinical management utilizing telemedicine triage clinics to refer children in a timely manner to dedicated hospitals dealing with specific ailments in children.

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