

# Telemedicine in Pediatrics: Introduction of an Innovative New Tool to Diagnose and Treat Children in an Ambulatory Setting

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## To the Editor

Online virtual consultation setting enables real-time exchange between two or more participants at different locations via audio and video communication [1-9]. In terms of the visualization of the discussion partners, telemedicine thus differs from a classic telephone conference and expands it to include the visual component [1-6]. The term telemedicine system refers to the technological setup or infrastructure behind such a telemedicine meeting, the telemedicine technology [1-7]. This refers to the hardware and software components that are required to carry out telemedicine technically [2]. The good news is that all these conference quirks no longer come into play in corona-conditioned video and telephone conferences [6-10]. There simply is not time for them anymore. Those who use telemedicine need the highest level of discipline. Telemedicine conferences have to be better prepared mentally, as they run in a more moderated, concentrated and focused manner. As a result, many employees who were previously rather critical of conferences are now getting to know a completely new form of treating children: faster, more productive, and more efficient. Added to this are the advantages that no one had to drive to the office for this (i.e., more environmentally friendly) and thus also saved the time that the commute would have taken [7-10].

Online consultation setting and questionnaire is shown in Table 1.

In conclusion, telemedicine in pediatrics plays a more important role since corona pandemic [5-10]. In virtual telemedicine, you can urgently react to any pediatric problem and telemedicine is time saving, especially in pediatric accidents. Compared to adults, parents are very happy about urgent information what to do, where to go and how is the next step to handle their child. To date, we use telemedicine to see, diag-

nose and treat the child in an ambulatory setting. In Germany, ambulatory pediatric management is fixed on 3 months terms (quarter treatment). In 1,400 pediatric patients in the last 3 months, we performed 400 telemedicine consultations (29%). In general, it is necessary that the pediatrician is well educated and has much experience in children medical care. Due to this routine, the pediatrician can evaluate the condition, fever, a rash and other features of the child and can make recommendations to the parents in a calm manner, without any hurry. The only difficult examination is the heart auscultation. When you perform highest quality in video conference in a child, you need a nurse, who has much experience, too. Telemedicine is a new tool to diagnose and treat children in an ambulatory pediatric setting to allow the pediatrician to work more flexible, especially in staff shortage situations and high patient volume.

## Acknowledgments

We acknowledge the parents who agreed with telemedicine support. Thanks for Leyla Dagdagan and Kathrin Krakowzyk for establishing the telemedicine ambulatory setting.

## Financial Disclosure

There is no financial disclosure, nor any funding.

## Conflict of Interest

There is no conflict of interest.

## Informed Consent

Not applicable.

## Author Contributions

SB performed research, data collection and did the telemedicine consultations at all; EL and GV read the manuscript and

Manuscript submitted October 13, 2021, accepted November 4, 2021  
Published online November 20, 2021

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doi: <https://doi.org/10.14740/jocmr4614>

**Table 1.** Online Consultation Setting and Questionnaire

Telemedicine virtual setting
Telemedicine setting will be established by iphone face time setting or other telemedicine services.
Questionnaire
1) Age of child, problem the child attends the doctor (anamnesis includes fever, condition of the child, rash, time the problem started), exact fever analysis, two-time fever measurement.
2) Clinical examination: starting from head to feet:
a) Head: color face; lymph nodes, eyes, ears, mouth, and neck.
b) Thorax: excursions, breathing, jugular withdrawals (obstructive?), distance belt, support of the auxiliary respiratory muscles (heart auscultation not possible but ECG and analysis of ECG with telemedicine).
c) Abdomen: assistant examines the abdominal four quadrants by control of the doctor in telemedicine, examination of umbilicus to diagnose umbilical hernia or inguinal hernia (hernial sac).
d) Check genitals: testicles inside the scrotum, redding of the scrotum, blue dot sign, hydrocele, inguinal hernia.
3) Therapy: prescribed medications by telemedicine; nurse provides prescription in the ambulatory center; parents/patients go to pharmacy.

ECG: electrocardiography.

gave important ideas to ameliorate the virtual consultation setting; LB gave recommendations towards the telemedicine setting and checked the references.

## Data Availability

Any inquiries regarding supporting data availability of this letter should be directed to corresponding author.

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