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Challenges in the Care of Children and Youth With Diabetes in Times of the Corona Pandemic: Personal View of the Situation in a German Clinic

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The best experience in this turbulent time was that in this disruptive situation, it counts to have a great team in your clinic, established structures, and workflows and at the most to have a close relationship to your patients and their families.

During the first days of March in Münster, Germany, the first schools and kindergartens were closed because of few coronavirus disease 2019 (COVID-19) positive tested children, especially after some classes came back from ski trips in Austria.

Pediatric practices, clinics, and hospitals were advised (or ordered) to establish infection clinics and to shut down routine to a necessary minimum. By March 12, we were able to establish a working telemedicine routine for video consultations for nearly all of our pediatric diabetes patients and their families. Apart from this, we still conduct face-to-face consultations and individual education sessions, with all the necessary precautions, but no education classes in groups.

How does it work, what are the benefits, needs, and hurdles?

Surprisingly, the change was fast, no bureaucratic problems. The obligatory acceptance of application and certification for telemedicine came within one day together with information and recommendations on how to proceed. Reimbursement was upgraded, with no limitation of sessions per patient or to special groups of patients.

With schools closed and schoolwork, exercises, and projects given to students online through the use of the school server and parents being in home-office, parents and children/adolescents, whole families, learned quickly how to use digital tools for their education, teleconferences, and videoconferences not only in business settings. This was great help to establish video telehealth visits, although limitations were seen on the technical side, for example, fast internet when using video, audio, and shared screen (enough mbits for uploads during video conference!).

One advantage we could count on now was the high percentage of patients with diabetes already using cloud-based programs for continuous glucose monitoring and insulin pumps, to a lesser degree SMBG and smart pens, for easy access to data. Even when uploading of data was not always being done routinely before visits in the past, now it is no topic anymore! And the new metrics describing glycemic control show another benefit now, as time in range, coefficient of variation, etc., have already been used and explained to patients and parents for some time now in our clinic. No need for A1c, at least in the short run. Actually, the video consultations are now faster, about maximum 15 minutes, compared to in-clinic visits, not to clock the time saved for the families.

We also established education one-to-one for special topics as videoconference, but of course not in cases where hands-on experiences were needed. Even when the team was a little skeptical in the beginning, it works very well. We also started first interactive virtual group courses, using well-known platforms from business settings, limited to 30 participants. These are more informative about the current interesting topics than educational group sessions, but we had to replicate them because of such a run on it. And the participants learned fast the "etiquette" of videoconferences, so this form is also very effective.

The topics covered in consultations, either face-to-face or telemedicine, are especially how to adjust to the new situation of being home all day. Insulin adjustment has been provided for home-school and the new situation of being all together with the family the whole day. It can be very relaxed like vacation, or with more stress (small home, parents in home-office, siblings, and home-school) or being alone at home if parents are still at work but nobody there to help like in school. There are advantage and benefit of second or third basal rate, temporary basal rate, but also pitfalls with "wrong" times in bolus advisors because of

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different daily routines. This shows who is well trained or who needs a refresher course, which can be easily done by structured "tele-education."

But there are also worries and real fear. The question if at special risk for COVID-19 is difficult to answer and here experiences and communication in the whole diabetes community can help, especially as it is done perfectly on the professional side through International Society of Pediatric and Adolescent Diabetes (ISPAD) or the American Diabetes Association (ADA). Unfortunately, data on children with diabetes and COVID-19 are sparse and we are very happy on the other side that this is so. The advice we give on going back to school has to be cautious but not overprotective.

So, there is still (or even more) the need and wish for personal contacts, in our clinic possible because of a separate entrance, only one family at a time, strict hygiene and personal protection regime, no physical, etc., except injection sites, which is very well accepted by the families. But telemedicine helps us enormously in this turbulent time. Digitalization and telemedicine are no luxury anymore! In the medical community, aversion or even rejection is diminishing and we have to keep the momentum to convince politics, bureaucracy, legal and payers of the great advantages, and the absolute necessity of it.

Diabetes teams and patients and their families are already convinced, at least one positive aspect of COVID-19.

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