


A Solution Focused Approach of Delivering Virtual Paediatric Diabetes Consultations During the COVID-19 Pandemic

Clinical Child Psychology
and Psychiatry
2022, Vol. 27(1) 177–184
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DOI: 10.1177/13591045211058336
journals.sagepub.com/home/ccp


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Abstract

The onset of the COVID-19 global pandemic rapidly accelerated the use of virtual consultations into everyday practice. A solution focused approach (SFA) has been established in paediatric diabetes care, resulting in positive clinical outcomes and communication. The aim of this study was to assess feedback from paediatric diabetes patients and their parents or carers regarding virtual consultations, using a solution focused approach, in a hospital setting. An electronic survey was sent to patients following their virtual consultation. Of those surveyed, 86% recommended video consultations to be part of their diabetes care. Qualitative data showed reduced travel time, comfort, reduced need for parking and convenience as the highest areas improved through video consultations. Clinical care was shown to be positive and addressed patients concerns, the majority of respondents (84%) reported that the appointment was about what they wanted it to be about. Using the solution focused model helped overcome the challenges faced with virtual consultations particularly with concerns surrounding safeguarding issues, confidentiality, audio/video difficulties and also helped to support the patient journey.

Keywords

Solution focused, solution focused approach, virtual consultations, paediatrics, diabetes, COVID-19

Introduction

The use of digital technology to improve accessibility and efficiency of services to maximise patient self-management has been recognised (Greenhalgh et al. 2018; Ng, 2018). Telemedicine is defined as the use of telecommunication and information technology for the purpose of providing remote

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health assessments and therapeutic interventions (Telemedicine, 2021). The use of telemedicine has been gradually increasing over recent years (Debnath, 2004), particularly for patients with chronic conditions such as diabetes (Mallow et al., 2016). A real-world study of virtual consultations use in a hospital setting from Greenhalgh et al. (2018), showed them to be safe, effective and convenient for patients.

The onset of the COVID-19 global pandemic rapidly accelerated the use of virtual consultations into everyday practice (Car et al., 2020). As part of the national video outpatient consultation contract, in response to the COVID-19 pandemic, NHS England and NHS Improvement provided a capital funding contribution to all trusts to support the rapid roll out of video capability. Attend Anywhere was a platform procured to provide free access to all NHS secondary care providers in England. This enabled trusts to easily establish virtual consultations to allow clinics to continue to run and engage with patients despite the global pandemic.

A solution focused approach (SFA) has been established in paediatric diabetes care, resulting in positive clinical outcomes and communication (Bray et al., 2020; Christie, 2008; Guyers et al., 2019). SFA is derived from a psychological model that differs from more traditional 'problem solving' and recognises the patient as an expert in their situation to help establish future goals (Guyers et al., 2019). It recognises the importance of being interested in children and young people's lives and how they manage their diabetes on a day-to-day basis, Guyers et al. (2019) gives examples of how SFA can be used by health care professionals (HCP) within paediatric diabetes. Simm and Barker (2017) describe a SFA advocate as 'working with the person rather than the problem; listening to and working with patient priorities, hopes and expertise to develop meaningful goals; noticing expectations and even the smallest signs of success, as defined by the person'. The Ormskirk model (Bray et al., 2020) also utilises guidance from NHS England, Language matters (NHS England, 2018) to facilitate discussion in diabetes management with people living with diabetes. The multidisciplinary Paediatric Diabetes Team at Southport & Ormskirk NHS Hospital Trust have demonstrated using SFA as an effective and efficient communication tool to assist with collaborative goal setting (Guyers et al., 2019).

With the format of patient engagement moving to a virtual platform it was important that the virtual clinic continued to maximise opportunities for solution focused consultations (Bray et al., 2020). The model detailed in Figure 1 describes the format used for virtual consultations to facilitate a solution focused approach and communicate effectively with both children and young people (CYP) and families and within the multidisciplinary team.

The aim of this study was to assess feedback from paediatric diabetes patients and their parents or carers regarding virtual consultations, using a solution focused approach, in a hospital setting.

Methods

A prospective survey was undertaken from patients attending virtual consultations with the paediatric diabetes team from a single centre based at Ormskirk District General Hospital, UK. The Southport and Ormskirk Trust children's paediatric diabetes multidisciplinary team (MDT) is a multi-professional team who is responsible for the care of children and young people with diabetes. The service supports a population base of over 250,000 people with an age range of 0–19 years. The paediatric diabetes unit cares for 160 children with type 1 diabetes and 98% are of white British ethnicity, ages 2–18 years old, 48% males. This was a service evaluation project audited under the Trust Audit department. A link to an electronic survey was distributed using the patient's preferred contact details via email and text message following their virtual consultation. Multiple people from one family did have the opportunity to complete the survey (e.g. parent and child/young person). A

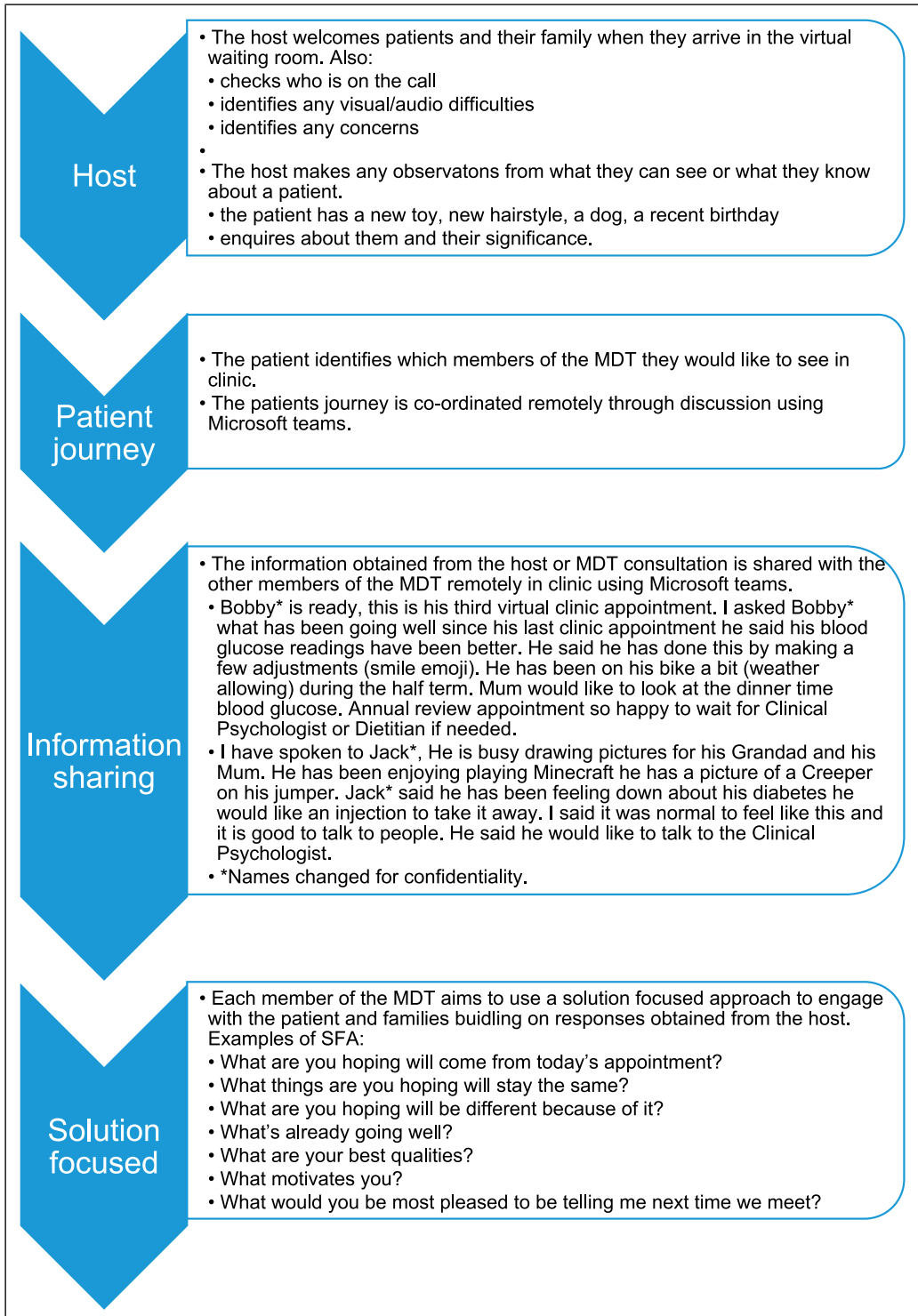


Figure 1. Solution focused approach to MDT paediatric diabetes clinics.

direct link to the survey was also shared via social media platforms (Facebook and Twitter) for further engagement as well as being publicised through the local Paediatric Diabetes Support Group. The survey was created using a web-based commercial software Google Forms which saves responses and generates spreadsheets for analysis. Responses were obtained over a 5 month period (1st May to 1st October 2020). Results were analysed for quantitative responses and common themes obtained from qualitative questions. Themes were sorted and clustered independently by two authors to ensure quality assurance. If a disagreement ensued, the third (senior) author would be included to resolve any disagreements. It is noted that any disagreement did not arise between the authors.

Results

A total of 22 virtual clinics were held between 1st May 2020 and 1st October 2020. Each clinic template is set at 10–12 patients per clinic run by a full MDT team (Consultant Paediatric Diabetologist, Paediatric Diabetes Specialist Nurses, Specialised Paediatric Diabetes Dietitian, Specialised Clinical Child Psychologist, Diabetes Educator and Patient Advocate). [Table 1](#) details the responses from the feedback survey; 37 feedback forms were obtained during this time period from parents (31) or children and young people (6). Overall, 86% of respondents (5/6 CYP, 27/31 adults) reported that they would recommend video consultations to be part of their diabetes care with the team. Compared with face-to-face clinics 79% (5/6 CYP, 24/31 adults) reported the quality of video consultations to be better or no different, with 22% (1/6 CYP, 7/31 adults) of all respondents

Table 1. Responses from feedback survey.

Question	Response	Adult (31)	CYP (6)	Total (37)	%
Would you recommend video consultations to be part of diabetes care with your team?	Yes	27	5	32	86
	No	1	1	2	5
	Other	3	0	3	3
How would you rate the quality of the consultation compared to a face-to-face meeting?	Better	6	2	8	22
	No difference	18	3	21	57
	Worse	7	1	8	22
Were there any audio/video difficulties during the consultation?	Yes	13	2	15	41
	No	18	4	22	59
How much was the appointment about what you wanted it to be about?	5 = Most	29	2	31	84
	4	0	2	2	5
	3	0	2	2	5
	2	0	0	0	0
	1 = Least	2	0	2	5
Areas improved through video consultation	Reduced travel time	28	4	32	86
	Comfort	26	4	30	81
	Reduced need for parking	21	4	25	68
	Convenience of clinic time	19	5	24	65
	Access to diabetes team/clinic	11	0	11	30
	Financial	3	1	4	11
	Other	2	0	2	5

reporting video consultations to be worse. Of those who found video consultations to be worse, 6/8 reported having audio/video difficulties with 1/8 reporting internet issues, despite this 4/8 who reported video consultations to be worse said they would recommend them as part of their care.

Qualitative data (Table 2) showed reduced travel time, comfort, reduced need for parking and convenience as the highest areas improved through video consultations. The most common theme highlighted as a positive outcome from the qualitative data was also that of convenience. Clinical care was also shown to be positive and addressed patient's concerns, the majority of respondents (84%, 2/6 CYP, 29/31 adults) reported that the appointment was about what they wanted it to be about.

Discussion

This study supports other reports (Clark et al., 2020; COVID-19 Book Club - Children and Young People's Views, 2020; Elbarbary et al., 2020) in demonstrating how effectively health care professionals have adapted their current practises and utilised technology during the COVID-19 pandemic. It has been positive to see how NHS England and NHS Improvement rapidly responded to the COVID-19 pandemic to provide capability for virtual consultations. This study shows how technology can be effectively used for multidisciplinary team working and co-ordinating patient care using a solution focused approach (Bray et al., 2020; Christie, 2008; Guyers et al., 2019). Royal College of Paediatrics and Child Health (RCPCH) recently detailed guidance to support clinicians with virtual consultations (COVID-19 Book Club - Children and Young People's Views, 2020), it describes 'supporting children and young people at the virtual front door'. Using the model outlined in Figure 1, with the use of a virtual host, helps overcome the challenges faced with virtual consultations particularly with concerns surrounding safeguarding issues, confidentiality, audio/video difficulties and also helps to support the patient journey.

Our findings support the recent RCPCH report 'reimagining the future of paediatric care post COVID-19' (RCPCH, 2020a) that demonstrated high levels of satisfaction for patients and families with virtual consultations, citing 'convenience, lack of need to travel and overall less time taken' as

Table 2. Feedback comments by theme.

Convenience	Clinical Care
Saving time going to the hospital.	Child preferred not having to go to the hospital.
So much easier and more relaxed.	Good for answering problems in between appointments.
Allowed for greater flexibility and took much less time from the day.	The call was effective and to the point.
Easy, more calm, save time to travel.	Everything which needed to be discussed was.
No driving or wasting a school/college day.	All the downloads had been reviewed before the call and all my questions answered.
It was great... would have been a 3 hour round trip face-to-face so it saved loads of time!	We as a family enjoyed our first video call, it was informative and Doctor got straight to the point making changes and answering any questions and involved all of us and explained changes clearly with a clear view of
Much better for us as saved time, child less anxious.	Tidepool [tool for data to be uploaded from diabetes devices] to discuss together.
It can sometimes be easier than trying to get to clinic in time for an appointment.	
It was really professionally set up and more comfortable being at home.	

the main positive outcomes. Solution focused approaches have also demonstrated positive feedback from CYP and their families with regards to effective communication and collaborative goal setting (Guyers et al., 2019), this was also demonstrated in the feedback from the virtual consultations with respondents reporting highly that the appointment was what they wanted it to be about. The responses showed more of a spread to this question from children and young people compared to adults; however, there was no significant qualitative data to explain these differences. Overall, the majority of respondents (86%, 5/6 CYP, 27/31 adults) reported being willing to recommend video consultations as part of their diabetes care, with similar responses from both adults and children and young people. It will be important to review whether this is still as important for families and patients once face-to-face clinics are re-established.

The use of technology in diabetes care has been shown to have improvements in care and cost saving implications for hospital trusts (Apperley et al., 2020; Peters & Garg, 2020). Apperley et al. (2020) demonstrated an improvement in mean HbA1c values (a marker of glycaemic control) in children with type 1 diabetes who routinely downloaded, reviewed their blood glucose data and attended routine outpatient appointments. Peters and Garg (2020) demonstrated how diabetic ketoacidosis was prevented through the use of technology, sharing glucose data and regular insulin dose adjustments, leading to reduced hospital admissions and therefore cost savings. The use of telemedicine to engage with patients and families is therefore an important aspect of effective diabetes management.

Challenges are faced however through health inequalities including poverty and socio-economic status leading to difficulties accessing technology and digital exclusion (Apperley et al., 2020; Lloyds Bank, 2020; NHS England and Improvement, 2020; RCPC, 2020b). Social deprivation is a significant factor affecting glycaemic control, with children less likely to download and poorer HbA1c levels seen in those from more deprived areas (Apperley et al., 2020). The 2020 consumer digital index from Lloyds Bank (2020) reports that approximately 16% of the UK population cannot undertake basic digital activities, with difficulties faced in turning on devices, opening applications and WIFI connection. It is the most socially and economic disadvantaged who are most likely to be digitally excluded (Lloyds Bank, 2020). While the recently published National Paediatric Diabetes Audit (NPDA) 2019/20 report (RCPC, 2021) has reported on health disparities and worsening access to diabetes technology on ethnicity, where the lowest use of insulin pumps or rt-CGM systems were among CYP of black ethnicity, while children of white ethnicity had the highest use of these devices (Ng & Evans, 2021), these statistics were not found in our cohort of patients and our unit has consistently been the highest top 10 centre in use of insulin pumps out of 185 paediatric diabetes units (Ng, 2015). It is however important to consider the ongoing implications for patients having access to technology to be able to attend virtual clinics and efforts need to be made to try and reduce health inequalities.

Conclusion

Limitations to this study included the small data set and the responses being limited to those patients who had access to technology to attend virtual clinics or complete the questionnaire. This study did not look at the experience of virtual consultations for the health care professionals and this is another area that will need to be assessed in future research. It is important to consider potential risks faced with virtual consultations including confidentiality and safeguarding concerns (Elbarbary et al., 2020) and whether virtual consultations are suitable for patient care long-term. It will also be important to consider in future studies how the experience of parents and children and young people with virtual consultations may differ and if there are any significant differences in this area.

Virtual consultations have provided a solution to the challenges of patient access faced through the COVID-19 pandemic. Although there are clear benefits highlighted, it is important to conduct further research into the impact of this model of care for both patients and professionals and to ensure systems are in place to create the best virtual health service experience ([COVID-19 Book Club - Children and Young People's Views, 2020](#)).

Acknowledgements

Thank you to Southport & Ormskirk Paediatric Diabetes Team (Lynne Finnigan, Helen Day, Michelle Quinn, Rebecca Hubbard, Marion Martin, Alison Hannah, Linda Connellan, Dona Pintus and Victoria Nesbitt) and most of all, the children, young people and their families at Southport & Ormskirk Hospital NHS Trust.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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