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A qualitative exploration of preventive dental advice for parents of children with congenital heart disease

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Abstract

Background/Aims: Children with congenital heart disease are at an increased risk of developing oral disease, which can negatively impact their general health and increase the risk of infective endocarditis. This study explored the preventive oral health advice given to parents of children with congenital heart disease and any barriers that exist to the implementation of this advice.

Methods: Four semi-structured interviews were conducted with parents of children with congenital heart disease, which followed a topic guide that explored personal experiences of oral healthcare provision and the advice received. Interviews were audio recorded and transcribed verbatim. Thematic analysis was undertaken by one researcher, with themes reviewed by a second.

Results: Improving awareness of oral health was highlighted as being important to participants. The prioritisation of the child's heart condition was also discussed, and participants felt that there were opportunities to develop the multidisciplinary collaboration between dental and cardiac teams. The consistency of messages could also be enhanced, as health advice sometimes contradicted oral health guidance, which could unintentionally increase the child's risk of tooth decay.

Conclusions: Enhancing collaboration between the various disciplines involved in the care of children with congenital heart disease is needed to ensure that appropriate advice and support is given to parents regarding oral health.

Key words: Child health; Congenital heart disease; Infective endocarditis; Oral health

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Introduction

Congenital heart disease affects approximately eight per 1000 babies born in the UK and Europe (Norrish and Kaski, 2018). There are various levels of complexity associated with congenital heart disease, and the chances of survival depend on the severity of the condition. Improvements in both diagnosis and treatment has led to approximately 80% of children with congenital heart disease surviving into adulthood (Knowles et al, 2012). Babies born with this condition are often premature and may spend many months in hospital during the first years of life, both for initial operations and follow-up treatments.

The oral health of children with congenital heart disease is of great importance, as they are at an increased risk of developing oral disease, such as tooth decay, and their general health can be adversely affected by oral disease or dental infections (FitzGerald et al, 2010). They are also more susceptible to the development of infective endocarditis, a condition which causes the lining and/or valves of the heart become infected, which can lead to permanent damage and sometimes death (Day et al, 2009). The risk of developing infective endocarditis is greater in patients with poor oral hygiene because of the oral bacteria entering the bloodstream (Hollatz et al, 2019). Additionally, there is evidence to suggest that, because of disturbances during enamel formation, children with congenital heart disease are at an increased risk of enamel defects, which may lead to an increased risk of developing tooth decay, as the enamel is of reduced quality (Balmer and Bu'Lock, 2003; Hollatz et al, 2019; Hughes et al, 2019). Previous research has suggested that children with congenital heart disease should be treated as high risk for tooth decay because of their increased risk of oral infections, which could lead to serious general health complications, including infective endocarditis (Hughes et al, 2019). Furthermore, untreated dental disease could lead to possible delays in cardiac surgery being carried out because of the need for these children to be free of untreated decay or infection at the time of their operation (Hughes et al, 2019).

In the dental environment, children with a medical condition that puts their general health at risk if they were to develop dental or oral disease are classified as 'medically compromised' (Saunders and Roberts, 1997). The increased risk of dental disease and the potential health consequences of associated infections place children with congenital heart disease in this category of concern. However, these children and their parents

often face barriers to good oral health. For example, FitzGerald et al (2010) found that the multifactorial basis of oral disease, along with the complexities of congenital heart disease, directly contributed to reduced oral health (FitzGerald et al, 2010). Increased levels of dental anxiety have also been found in children with congenital heart disease, possibly caused by the amount of time they had already spent in clinical settings because of their heart condition (Hollis et al, 2015).

Several studies have highlighted that parental knowledge and awareness of the importance of good oral health in relation to their child's heart condition and potential risk of infective endocarditis requires improvement (Saunders and Roberts, 1997; Balmer and Bu'Lock, 2003; Schulz-Weidner et al, 2020). A lack of parental knowledge regarding oral health could contribute to the development of tooth decay in these children, which could in turn impact their general health and heart condition. As a multidisciplinary team is pivotal in the care of children with congenital heart disease, it has previously been suggested that a collaborative approach is required between paediatric dentistry and paediatric cardiology (Schulz-Weidner et al, 2020).

This study investigated the preventive oral health advice given to the parents of children with congenital heart disease and the barriers to the implementation of this advice.

Methods

Ethical approval for this study was obtained from the University of Leeds Dental Research Ethics Committee (Ref: DREC:170415/JO/165).

A purposive sample of parents of children with congenital heart disease was recruited using a snowball sampling technique via a local charity's social media page centring in and around the Yorkshire area. Semi-structured, one-to-one interviews were conducted with parents of children with congenital heart disease. A topic guide was developed from existing literature and was piloted to refine the questions. The topic guide was further developed after each interview using a constant comparative technique (Hewitt-Taylor, 2001). Interviews took place in participants' homes or local public venues that were convenient to participants. Information about the study was emailed to all participants 1 week before each interview and consent was gained for all participants on the day of the interview. Interviews were audio recorded, transcribed verbatim and analysed using thematic analysis in Nvivo version 10.

A phenomenological approach was adopted to analyse the data (Braun and Clarke, 2006). The oral health advice parents received, alongside any barriers they identified, were explored and coded by one researcher to generate themes. All themes were then reviewed and refined, and redundant themes were discounted through an iterative process. Primary analysis of the data was undertaken by one researcher using deductive thematic analysis (Braun and Clarke, 2006), then the themes were reviewed by a second researcher and agreement achieved through discussion.

Results

Four individual parents (all mothers) were interviewed, with each interview lasting 45–60 minutes. The age of parents ranged between 30 and 45 years, with the age of the child with congenital heart disease ranging between 15 months and 4 years. The parents had between one and three children, and all were white British.

Three key themes emerged regarding the preventive oral health advice given to participants and the barriers to the provision of this advice: awareness of oral health, priority of the heart condition and consistency of health messages.

Theme one: awareness of oral health

All participants stated that they had received information from the cardiac unit in the form of a booklet when their child was discharged from hospital. The booklet contained details about their child's heart condition, along with advice on the prevention of infective endocarditis, including a statement that the child must have good dental hygiene. Some participants recalled verbal information being given to them by the cardiac team on the importance of brushing their child's teeth to prevent infections. They recalled having brief conversations and discussions about registering with a dentist, and in one case brushing advice was reinforced at a follow-up outpatient appointment by a liaison nurse. Two participants recalled that advice relating to the prevention of tooth decay was mentioned, one by a hospital consultant during a recall visit and another on a referral visit to a paediatric dentist.

The participants talked about healthy eating and the development of tooth decay with a degree of knowledge, but they also noted that their knowledge on this topic was not from advice given by healthcare professionals. Instead, the knowledge was gained either from internet searches or general dental information provided at their own dental appointments. Some participants were aware that their child needed to have good dental hygiene, but

wanted further information on what this actually entailed and why maintaining optimal oral health was so important for their child:

'[We understood] that she had to have good dental hygiene, but what that good dental hygiene means, I think, we could have done with knowing a little bit earlier.'

'I do not think anybody would intentionally put their child in that position after all they have come through. I do just think that people need more of an understanding of why they need to look after the teeth and what happens if they do not, you know, the risks associated with it.'

Participants also reported a lack of knowledge about children's' teeth and discussed the perception that baby teeth are only temporary and thus unimportant:

'I did not know that they keep their back teeth until the age of 12/13 years... Nobody tells you about baby teeth.'

'It is more the parents you meet in the community, it is like "oh it will be a baby tooth, it will be fine, it will fall out and they will grow back."'

Theme two: prioritising the heart condition

Participants described the initial discharge from the cardiac unit as being a very stressful time; they were taking their new baby home, probably for the first time, with medication and medical issues to consider. During this time, participants felt that they could become overloaded with information and either forget what was discussed or not comprehend the key information related to oral healthcare:

'At times it is very stressful and you are just kind of happy to be taking them home sometimes. And you might forget everything that has been said to you. And sort of a leaflet, leaflets are all well and good, but you know yourself that most people do not read them as well as they should do.'

During the early weeks and months of these children's lives, participants recalled that their sole focus was on their child's general health. Issues relating to their child's teeth were not prioritised and most activities were focused on helping the baby to live and grow

to become a healthy size and weight:

'You are solely thinking of the heart, you are not really thinking of the knock-on effects of not looking after their teeth or a poor diet.'

Many participants discussed the multidisciplinary nature of the care that their child received. Most had seen various healthcare professionals at different times during their child's early life, including cardiologists, neonatal specialists and dieticians. Participants noted the absence of a dental professional from this time:

'[On leaving hospital] there is no connection with any dental area or anything, except for neonates who say "my job is to look at the development of your child". Then we get also referred to the cardiac who says "my job is to look after your heart".... It is very disjointed... with a child who may have more than one need.'

This was also drawn out by participants who perceived the role of the cardiac and neonatal teams as to concentrate on the child's heart health and development respectively. Healthcare teams' lack of time was also highlighted as a possible barrier to oral health advice provision:

'The neonates will look at the baby, and the cardiac will look at the heart, and that is all they concentrate on.'

'I think they would like to know a bit more about it but they are that busy on the ward, I do not think they have got time to explain to you.'

Some participants felt that increased integration and communication between different healthcare teams would be beneficial, and it was suggested that including a dental professional in the cardiac team may also be of value:

'I think maybe incorporated in that team could be somebody that would offer support, whether it be for parents who are in there at the moment with their child, or whether it be parents coming up for their follow-up appointment.'

Theme three: consistency of health messages

Most participants were referred to a dietician for advice on weight gain, as their child was underweight as a result of their heart condition and/or being born prematurely. The parents highlighted that it was of paramount importance that their child gained weight quickly so that they were able to undergo further treatment, including surgeries, for their congenital heart disease.

'The reason why is that she had to go through this operation, and they said the larger the child, the more successful the operation is.'

A major challenge when attempting to help a child gain weight is the impact on their oral health, as the advice often conflicts with guidance on the prevention of tooth decay (Office for Health Improvement and Disparities et al, 2021):

'...The health dietician... she basically told us to give him to eat whatever he wanted to put weight on.'

Another parent was advised to feed their child little and often to help with the acid reflux the child was experiencing. Without oral health knowledge and advice, this could increase the risk of tooth decay because of frequent consumption of fermentable carbohydrates in food and drink (Office for Health Improvement and Disparities et al, 2021).

Discussion

Thematic findings

Participants stated that, although they were given booklets about their child's health in the early stages of diagnosis, there was little content on oral health. The lack of further explanation also left some of the participants with only a basic understanding of oral

hygiene and infective endocarditis. A basic leaflet within an information pack or brief verbal advice may be overlooked and, with the sheer volume of information received, not all of it can be retained. Kessels (2003) investigated the information recall of patients following advice provided by clinicians, and found that patients often forget or misremember the majority of the information provided to them, especially during times of increased stress. An explanation of the relevant oral hygiene and infective endocarditis advice could allow the parents to gain a more thorough understanding of the subject, which may help to make the advice more memorable.

The health belief model (Becker, 1974) suggests that, if there is an appreciation for the potential impact of a health behaviour, additional steps to change that behaviour are more likely to be taken. Similarly, Knöchelmann et al (2014) found patients often remembered information better when they perceived the medical condition to be more serious. In this case, participants did not understand fully that their child was susceptible to oral health problems and that tooth decay could pose a significant health issue. Improving the clarity of this message may support an increased effort by parents to sustain good oral hygiene. Parents of children with complex medical conditions, such as congenital heart disease, often face a variety of challenges relating to their child's condition. Understandably, this means that they may have many other priorities on a day-to-day basis, such as medication regimens or dietary concerns. This research has highlighted that these parents may prioritise their child's heart condition over their teeth and oral health. This could either be a result of competing priorities, or the fact that the importance of oral health for these children had not been properly discussed with parents. Without awareness of the potential risks to their child's oral and general health, parents may not understand the importance of developing and maintaining good oral health habits. These findings align with previous studies, which also found that oral health was often overlooked by parents because the child's medical problems were prioritised (Saunders and Roberts, 1997; FitzGerald et al, 2010).

Concerns regarding diet and nutrition were highlighted by participants. Information provided by dieticians was primarily to improve the child's nutrition and help them gain weight, as this is important to their general health. However, the advice given to participants was often related to frequent intake of high-sugar and high-calorie food and drink, which contradicts

advice on prevention of tooth decay (Office for Health Improvement and Disparities et al, 2021). Schulz-Weidner et al (2020) found that, when compared to a healthy control group, children with congenital heart disease had a higher daily intake of foods and drinks that were likely to lead to tooth decay. Raising awareness of tooth decay and ensuring that this is embedded into nutritional advice for children with heart disease is thus important to prevent oral diseases in this vulnerable patient group.

Multidisciplinary collaboration

Previous studies have recommended that children with congenital heart disease should be linked to paediatric dental care teams (FitzGerald et al, 2010; Hughes et al, 2019).

Participants in the present study highlighted a lack of preventive oral health advice and support, which, along with conflicting advice from different healthcare teams, could be placing these children at an unnecessary risk of developing tooth decay. It is important to note that participants often struggled to recall information, so they may have received it, but were unable to take it in at the time because of stress, competing priorities or how the information was presented.

Participants also noted that they would benefit from a member of the dental profession being routinely incorporated into their child's multidisciplinary team, as this additional support could lead to a more consistent approach to the provision of advice. This suggestion is supported by various studies recommending that paediatric dentists, cardiologists and other associated health practitioners should collaborate more to improve oral health awareness in parents of children with congenital heart disease (Hollatz et al, 2019; Schulz-Weidner et al, 2020).

Participants felt that there may be opportunities to enhance their child's multidisciplinary care in relation to both oral health and dietary advice. Collaborative multidisciplinary care would help to ensure that any support and advice given to parents is sufficient to maintain good oral health for their child, and provided in conjunction with the care that they are receive for their heart condition. Schulz-Weidner et al (2020) recommended that children with congenital heart disease should receive early intensive oral health intervention to improve and maintain their oral health, and that better integration between the cardiology and dental teams would be beneficial

Oral health is not currently part of mandatory continued professional development for nurses. However, the Nursing and Midwifery Council (2018) standards discussed a nurse's role in oral health care as being able to 'demonstrate the knowledge, skills and ability to act as a role model for others in providing evidence-based, person-centred nursing care to meet people's needs related to mobility, hygiene, oral care, wound care and skin integrity and assess needs for and provide appropriate oral, dental, eye and nail care and decide when an onward referral is needed'. With the growing need to incorporate oral health and general healthcare, supportive resource development for nurses could be beneficial to both fields and ultimately improve patient care (Uppal et al, 2019).

Development of guidelines

In 2014, NHS England carried out a consultation exercise among patients with congenital heart disease and their families (NHS England, 2014). Participants recommended an integrated approach, highlighting the importance of care that was not directly associated with their cardiac condition. Following this initial exercise, NHS England (2016) published the Paediatric Congenital Heart Disease Specification document. These guidelines consisted of five key points relating to evidence-based preventive dental advice, dental treatment needs and provision, and specialist dental assessments for children at the age of 2 years who are at an increased risk of developing infective endocarditis. This is an encouraging step, as advice and assessment are two key areas that were highlighted in the present study as having the potential to improve awareness and understanding of the child's oral health needs.

The guidelines also promote interdisciplinary working between paediatric cardiology and dentistry (NHS England, 2016). However, they do not address the implementation and delivery of the advice, or the support required to help families make the changes in behaviour at home on a daily basis. Unfortunately, as previous research has shown, increasing knowledge and awareness of a health condition does not always lead to the desired behaviour change, especially in the long term (Michie et al, 2011). As noted by Fischer et al (2016), guidelines are not always well implemented into practice, and having a structured implementation plan can improve adherence to guidelines. Therefore, the mode of delivery and timing of advice, along with provision of appropriate supportive resources,

are vital to achieving the required behavioural change for these families (Fischer et al, 2016). Investigating the impact of the NHS England (2016) guidelines on the families of children with congenital heart disease would also inform the implementation of preventive advice into the care pathway of these children.

Exploring parents' experiences of oral health advice that they were given for children with other long-term medical conditions could also be enlightening, perhaps for some conditions the service experiences are different. Moving forward, it is important to understand what support and advice families would like, when they would like the advice to be provided, and in what format. The healthcare teams' perspective is key to the successful implementation of any future intervention and resource development. Therefore, future research should explore the perspective of those providing care to identify the barriers that they face, and if a feasible intervention can be incorporated into the existing care pathway for these children. An investigation into the impact and implementation of the NHS England (2016) guidelines from the perspective of both the healthcare team and family would strengthen future work in this area.

Key points

- Children with congenital heart disease are often at increased risk of tooth decay, which in turn can increase their risk of infective endocarditis.
- Parents of children with congenital heart disease felt that they needed more consistent information about their child's oral health, which could be achieved by having a dental professional on the multidisciplinary team.
- Advice regarding the child's oral health and overall health sometimes did not align, with the importance of weight gain and adequate nutrition being prioritised over oral health.
- It is important to develop an oral health intervention for this patient group with resources that are easy to implement and do not place further burden on families or healthcare teams.

Reflective questions

- What do you feel some of the barriers might be to the integrated delivery of oral health

advice alongside other healthcare disciplines?

- What are your thoughts on oral health being integrated into your current role?
- Do you feel that you have received adequate training in oral health to be able to support families of children with congenital heart disease to improve and maintain their oral health?
- How do you think that dentistry could support you to be able to incorporate oral health into your daily work?

Limitations

In qualitative research where thematic analysis is undertaken, a sample of six participants is recommended to achieve data saturation (Guest et al, 2006). After four interviews in the present study, no new information was discovered, so no more participants were recruited. The participants fully engaged with the interview questions and explored the topics in great detail, so there is some indication that the subject matter in question was explored sufficiently. However, future research should draw on a wider pool of participants from more diverse ethnic and socioeconomic backgrounds, particularly as congenital heart disease is more common among children from Black and Asian ethnic backgrounds (Knowles et al, 2017). The responses provided by the study participants may be subject to bias. Recall bias may have occurred, as participants were being asked to recount experiences from a distressing time which could lead to inaccuracies. However, given that prevention of poor oral health is so important in this patient group, the fact that participants did not recall advice well is an important finding.

Conclusions

This research found that awareness of oral health and the priority of the child's heart condition greatly affected whether parents are in a position to follow and understand oral health advice given to them. This study has highlighted the parental perspective regarding ways in which the provision of advice, especially in relation to oral health, can be improved. Further development of collaboration between the various disciplines involved in the care of children with congenital heart disease could be instrumental in providing this improved advice and support to parents.

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Conflicts of interest

The authors declare that there are no conflicts of interest.

References

- Balmer R, Bu'Lock FA. The experiences with oral health and dental prevention of children with congenital heart disease. *Cardiol Young*. 2003;13(5):439–443. <https://doi.org/10.1017/S1047951103000921>
- Becker MH. The health belief model and sick role behavior. *Health Education Monographs*. 1974;2(4):409–419. <https://doi.org/10.1177/109019817400200407>
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Day DM, Gauvreau WK, Shulman WS et al. Characteristics of children hospitalized with infective endocarditis. *Circulation*. 2009;119(6):865–870. <https://doi.org/10.1161/CIRCULATIONAHA.108.798751>
- Fischer F, Lange K, Klose K et al. Barriers and strategies in guideline implementation—a scoping review. *Healthcare (Basel)*. 2016;4(3):36. <https://doi.org/10.3390/healthcare4030036>
- FitzGerald K, Fleming P, Franklin O. Dental health and management for children with congenital heart disease. *Primary Dental Care*. 2010;17(1):21–25. <https://doi.org/10.1308/135576110790307690>
- Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods*. 2006;18(1):59–82. <https://doi.org/10.1177/1525822X05279903>
- Hewitt-Taylor J. Use of constant comparative analysis in qualitative research. *Nurs Stand*. 2001;15(42):39–42. <https://doi.org/10.7748/ns2001.07.15.42.39.c3052>
- Hollatz S, Wacker-Gussmann A, Wilberg S et al. Awareness of oral health in adults with congenital heart disease. *Cardiovasc Diagn Ther*. 2019;9(S2):S281–S291. <https://doi.org/10.21037/cdt.2019.01.01>

Hollis A, Willcoxson F, Smith A et al. An investigation into dental anxiety amongst paediatric cardiology patients. *Int J Paediatr Dent*. 2015;25(3):183–190. <https://doi.org/10.1111/ipd.12111>

Hughes S, Balmer R, Moffat M et al. The dental management of children with congenital heart disease following the publication of paediatric congenital heart disease standards and specifications. *Br Dent J*. 2019;226(6):447–452. <https://doi.org/10.1038/s41415-019-0094-0>

Kessels RPC. Patients' memory for medical information. *J R Soc Med*. 2003;96(5):219–222. <https://doi.org/10.1258/jrsm.96.5.219>

Knöchelmann A, Geyer S, Grosser U. Maternal understanding of infective endocarditis after hospitalization: assessing the knowledge of mothers of children with congenital heart disease and the practical implications. *Pediatr Cardiol*. 2014;35(2):223–231. <https://doi.org/10.1007/s00246-013-0763-8>

Knowles RL, Bull C, Wren C et al. Mortality with congenital heart defects in England and Wales, 1959–2009: exploring technological change through period and birth cohort analysis. *Arch Dis Child*. 2012;97(10):861–865. <https://doi.org/10.1136/archdischild-2012-301662>

Knowles RL, Ridout D, Crowe S et al. Ethnic and socioeconomic variation in incidence of congenital heart defects. *Arch Dis Child*. 2017;102(6):496–502. <https://doi.org/10.1136/archdischild-2016-311143>

Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Sci*. 2011;6(1):42–42. <https://doi.org/10.1186/1748-5908-6-42>

NHS England. Proposed congenital heart disease standards and service specifications: a consultation. 2014. <https://www.engage.england.nhs.uk/consultation/congenital-heart-disease-standards/> (accessed 1 February 2022)

NHS England. Paediatric congenital heart disease specification. 2016. <https://www.england.nhs.uk/wp-content/uploads/2018/08/Paediatric-congenital-heart-disease-specification.pdf> (accessed 1 February 2022)

Norrish G, Kaski J. Congenital heart disease: an ageing problem. *Br J Cardiol*. 2018;25:46–7. <https://doi.org/>

org/10.5837/bjc.2018.015

Nursing and Midwifery Council. Future nurse: standards of proficiency for registered nurses. 2018.

<https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/nurses/future-nurseproficiencies.pdf>

(accessed 9 February 2022)

Office for Health Improvement and Disparities, Department of Health and Social Care, NHS England et al. Delivering better oral health: an evidence-based toolkit for prevention. 2021. <https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention>

(accessed 9 February 2022)

(accessed 9 February 2022)

Saunders CP, Roberts GJ. Dental attitudes, knowledge, and health practices of parents of children with

congenital heart disease. *Arch Dis Child*. 1997;76(6):539–540. <https://doi.org/10.1136/adc.76.6.539>

Schulz-Weidner N, Logeswaran T, Schlenz MA et al. Parental awareness of oral health and nutritional behavior in children with congenital heart diseases compared to healthy children. *Int J Environ Res Public Health*. 2020;17(19):7057. <https://doi.org/10.3390/ijerph17197057>

Public Health. 2020;17(19):7057. <https://doi.org/10.3390/ijerph17197057>

Uppal S, Uppal P, Okike I. The nurse's role in oral assessment and care of children in hospital.

Nursing

Times. 2019;116(1):30–34