RCPCH The Paeds Round

Drilling Down into Teeth

Transcript of podcast – July 2025

[Music starts]

Peter: Children's oral health is in a crisis, and it's unfortunately not improving as much or as quickly as we would like.

So, the most common for children to come into hospital is for dental reasons, over twice as common as for ENT procedures.

Emma: You learn to ride a bike, you learn to eat healthy. Why should you not learn how to brush your teeth?

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Emma: Welcome. It's really exciting to see you and talk to you today, Peter. We're here for our Paeds Round podcast, and it's my pleasure to introduce you. So, my name is Emma Lim and I'm a paediatric consultant at the Great North Children's Hospital, and today I've got Peter Day in the studio with me. Welcome Peter.

Peter: Hello, Emma. Thank you very much for inviting me. It's a great pleasure to be here.

Emma: And where are you from? What do you do?

Peter: So, Emma, I'm a paediatric dentist, which is great. I don't have to see anybody older than the age of 16/18, and I get to behave like a child in clinic and try and make coming to the dentist as acceptable to as many children as possible. As a paediatric dentist, we see a wide range of patients, all sorts of different medical conditions, disabilities, as well as some quite complex dental conditions, whether it be genetic, traumatic or for us, one of the main causes of our work is dental decay, which is one of the most prevalent conditions in children.

Emma: That's great. And I think you've been humble, because you're just acting like you're just a dentist, and I think that's not quite true, is it? Because I think you have a real academic bent and a passion to talk about the state of children's teeth. So, you also work as an academic, don't you?

Peter: So, I'm a paediatric dentist a couple of days a week, I work in community dental services in Bradford, where I have a cohort of children with disabilities, and very much, many of them go to special schools or mainstream schools with additional support. And then in my clinics in Leeds, it's more of a multidisciplinary clinic, looking after children who traumatise their teeth, and come off their bicycles and other complexities like that.

And then academically, you know, the great thing about my job is that I have a lot of variety, so I've got a bit of teaching, a bit of research, and as you've mentioned, Emma, I work for University of Leeds as a professor of child health, child dental health sorry.

Emma: I thought you were suddenly going to make yourself a paediatrician there.

Peter: No, I'll leave that to you!

Emma: And we're talking today because you wrote this incredible report last year, that actually everybody should read, which focused on children of the North. And the headline was that tooth decay has a direct impact on a child's quality of life, and we should be shocked at the poor condition of many of our children's teeth. So, what are the stats? What does that actually mean?

Peter: So, Emma, before I start, I would just like to say it was a team effort, and my colleague, Zoe Marshman, who's professor of dental public health in Sheffield and many colleagues got together in early February 2024. We had a really good day, you were there Emma, and we got to summarise child dental health and explore the preventive aspects of how we can improve the current situation.

You're totally right. Children's oral health is in a crisis and is unfortunately not improving as much as or as quickly as we would like.

Emma: 'Children's oral health is in a crisis,' that's a strong statement. What are your statistics to back up that?

Peter: Unfortunately, that's true. It is a crisis. If we look at different age groups, so 10% of three-year-olds have decay, by five it's up to a quarter of children, so one in four, and those are both related to primary teeth. But when we look at permanent teeth, at 12-year-olds, it's a third of children, and by 15-year-olds it's up to about 45%, so almost every other child has decay in their teeth by the age of 15.

Emma: Actually, that's terrible. That's shocking!

Peter: Unfortunately, it is. And it's not just counting, but it's the impact that decay has, and that's around, you know, child development, inabilities to sleep, to eat, to talk and to

do everything, the normal things that children like doing, like going to school and playing. And its impact is not just on the child level, but on their wider family, society and obviously, health and education.

Emma: That is actually, really shocking. So we said every other child by the age of 15 has some form of tooth decay, as you said, there's the pain, there's the drugs that children take for pain, there's school days missed, and there's the impact on the whole family, so taking time off to get them to the dentist, all those other things, that's huge.

If we drill down on that a little bit, you've talked about the impact on the child, but what is the impact on the health service?

Peter: So, the most common reason for children to come into hospital is for dental reasons, twice as common as for ENT procedures. And almost invariably, if they're coming into hospital, they're coming in for a general anaesthetic to have, almost always, teeth extracted, but sometimes dental treatment, so it might include fillings.

The cost to the NHS is about £40 million for those admissions. There are over 27,000 children waiting on those waiting lists, with some children waiting up to 80 weeks to get to the top of that list. And often those are the disadvantaged children, often with significant morbidity and disability as a result of their weight and then obviously it can affect their medical conditions as well.

Emma: That is actually so shocking. So, you're telling me that the most common reason to have a general anaesthetic is for tooth extraction, for decay?

Peter: Correct Emma, for children aged five to nine years old, admission to hospital, which almost invariably is for extractions under general anaesthetic, is for dental reasons. It's over twice as common as for ENT procedures. And there are over 27,000 children waiting on that waiting list, costing the NHS over £40 million, just in that particular aspect of treatment, and some of our children are waiting over 80 weeks to be seen, and often those children are the most disadvantaged, many with additional disabilities as well.

Emma: I'm just speechless. I'm just thinking about that £40 million just to pull teeth now. I mean, what else could we do with that £40 million? Why aren't we using it in preventative health? Because, if we are honest about this, this is a preventable problem.

Peter: Absolutely, almost all tooth decay is preventable. Sometimes enamel, can erupt through which is not as well formed. But we get the teeth that we get. You know, with goods, oral health behaviours, we can prevent that decay. Certainly, if we do get decay, then it's around early access to the dentist to identify it and treat it early before it gets complex, and you need to be ending up in hospital with dental extractions under general anaesthetic, etc.

Emma: Let's say we were going to use that £40 million earlier in preventative health, what are our options? What are things we could do? I mean, I've got four children, right? But I'm a paediatrician, and it is like the law of the land you cannot leave the house in the morning until you brush your teeth. And I sat over my children and brushed their teeth till they were about seven. But I think I'm probably an outlier, so come on, what should people be doing? What are people doing?

Peter: So, Emma, as in our report, we had a number of key recommendations, but one of them was very supportive of the government's plans to supervise tooth brushing clubs. The approximate cost is around £10 million and that is targeted at the most deprived 20% of children, specifically focused on children aged three to six years old. So, this is nursery and early years of primary school. This is basically supervision, and often uses additional staff within schools, rather than teachers, to support that activity where children brush their own teeth, and that activity happens every day, at some point which is convenient to the school during that day. And for some children, that is the only time their teeth get brushed in the week. And so, five times a week is better than no times a week.

And I think you're right, Emma, the behaviours that we do at home are absolutely critical to having healthy teeth and growing up with a healthy dentition and good dental health, but for some of our families, those behaviours are a struggle to embed and implement, and so supervised tooth brushing can be very effective.

Emma: Yeah. I mean, that's really fascinating, isn't it? I mean, we totally accept breakfast clubs, so children go to school and have breakfast clubs. So, my children will brush their teeth after eating, so that seems like a really normal thing to do.

I think that one of the things that people don't realise is what poverty looks like and what resource poor areas are like to actually be in and to grow up in. So you and I have done some work with, for me the West End Food Bank in Newcastle, and you're obviously in Leeds, and we're meeting families who can't afford toothbrushes, who can't afford toothpaste, who can't afford clothes, who can't actually afford meal planning, and I think that's a really different space to what people are used to, and maybe what you're used to from your own background.

Peter: Very true, Emma. I work in Cllefly as part of my clinic, we have some wonderful local community groups and community kitchens, and support and food hubs, and as part of that provision, we work very hard to enable them to give out toothpaste and toothbrushes.

The supervised toothbrushing programme, which is proposed by the government, involves not just toothbrushes at school, but potentially for them to take home during holidays and other times, so to encourage those behaviours in the home setting as well.

And often the feedback from children and their parents is those activities do help to support and drive behaviours at home as well, and obviously you do need the tools, but toothbrushing requires a little bit of some other parenting skills, more than just the actual toothpaste and toothbrush, it's that ability to support and enable and plan for your child to brush their teeth as part of the daily activity.

Emma: Yeah, I think that's really true. I mean, I see school as a place where you're learning skills. Now, you learn a bike, you learn to eat healthy. Why should you not learn how to brush your teeth? So, I want to know two things, what is supervised tooth brushing, first off, and what's the evidence it helps?

Peter: So supervised tooth brushing is undertaken by children aged three to six years old, in nursery and in school, often the toothpaste is applied to a tissue and a small pea sized amount, and each child has their own toothbrush. They have special racks, which are disinfect-able and cleanable, so it makes it as clean as possible. And the supervision is to ensure that the right child picks up their own toothbrush, that the child actually brushes their own teeth, often with an activity and a toothbrushing song to encourage that brushing for a couple of minutes. At the end of that, the child often spits out any excess residue into the tissue, and the toothbrushes are then washed under a tap and replaced in the hold, dried and replaced in the holder.

Emma: Oh, yeah. So, I found this really interesting. So, it's a pea sized amount of toothpaste, it goes on a tissue, they put it on their own toothbrush. They brush their teeth for a couple of minutes, spit it put no rinsing. I couldn't get my head around no rinsing! I spent my life rinsing my mouth. I didn't realise I wasn't supposed to rinse it off, and then cleaned and dried.

Peter: Emma, I was in clinic on Friday, and my dental nurse had a really good suggestion. When you put, and I'm sure you don't, when you put your face cream on, the last thing you want to do is then wash it off. And the same as with toothpaste, we want it to stay on the team and have that that impact.

Emma: Yeah, I love it. Love it, yeah. Why am I washing it all off. Alright, so we know what we're doing now, what is the evidence that watching somebody brushing their teeth makes a difference to their long-term oral health.

Peter: So, the evidence predominantly comes from Scotland, where they have a national program already. The evidence is that it reduces dental decay in young children. It reduces health inequalities, so those children who are most in need, have the most benefit. And it's cost effective in that it saves money. And they reckon from the calculations in Scotland, that within three years, it paid for itself in less costs to the health service as a result of the implementation of the supervised tooth brushing program.

Emma: So, you're telling me, in three years, supervised tooth brushing paid for itself by reducing dental decay?

Peter: That is the data from Scotland. There's a different health economics tool called Return on Investment, and over a five-year period, for every £1 you spent on it, you got £3 back.

Emma: Why don't we do this earlier?

Peter: And what's so exciting is it reduces health inequalities, which often are public health interventions, wider health inequalities, and in this setting, they reduce them. And probably the reason is, because some of our most disadvantaged children, they're getting to brush their teeth five times a week, which wouldn't happen otherwise.

Emma: Absolutely, just like school meals. So, really fascinating. And I think it's so true, because you teach a child and they actually go back and teach the family, and there's good evidence that happens with all sorts of different skills. So, yeah, I'm like, you know, we could stop now, you said it. I'm converted!

Alright. So, we've talked about supervised tooth brushing, we've talked about how simple it is, we've talked about how much it saves money. We've talked about the impact on children from the most resource poor areas, but there are other ways to reduce dental decay. And I know that toothbrushing, you know, that's your baby, isn't it, but there are other babies around there. You want to touch on those other children. Those other options.

Peter: So, Emma, you're quite correct. It's around reducing sugars and increasing getting fluoride on the teeth. If we focus on sugars, it's around reducing sugar consumption. And certainly, when we're looking at national interventions, the soft drinks industry level has had a significant impact on children's dental health.

Emma: Yeah, I'm passionate about this. This drives me insane.

Peter: So, there's some really nice research led by a lady called Dr Nina Rogers, and she summarised it very nicely, so I'm going to steal some of her descriptions. So, the WHO advice is that you should have 30 grams of sugar per day. But the reality is, in adolescence, it's probably more like 80 grams a day. And adults, it's around 50 grams a day. And to put that in context, for chocolate bar and others, chocolate bar is about 20 grams, and we know that sugar is in many, many different processed foods. The current tax is got two levans. Above eight grams per 100ml was a certain tax level, and then between five and eight grams per 100ml was the next tier and then below five grams, there was no tax. And what this helped was not only bringing in revenue, but industry reformatted and reformulated foods to reduce the sugar count.

Emma: I think the interesting thing about the sugar tax is, it's one of those things that people want to beat parents over the head with a stick. But the difficulty is thinking about why you make those choices. So, the people and the family buying processed food, are the families who can't afford fresh food. So, if we put it this way, my children drink milk, water, and once a day, if they're lucky, they drink half a glass of fruit juice, which I used to dilute with water when they were younger. And I actually don't give them fruit juice, but that's expensive. So fresh fruit juice is really expensive. Fresh fruit is really expensive, and processed drinks like Coke and fruit drinks that have all that hidden sugar in, are really cheap, so this is also about the choices you have when you don't have a lot of money,

Peter: You're totally right, Emma, and our recommendations were to reduce sugar, but that was to apply the soft drinks industry levy to other sugared sweetened beverages. So that includes the Fruit hoot, other products of the same ilk, as well as some milk-based sugared, such as milkshakes. So, we wanted to apply that to other sugared, sweetened and beverages, restrictions of food marketing and advertising and promotions, and restriction of sales of caffeinated energy drinks for the under 16s.

Emma: Yeah, I mean those energy drinks, the whole Prime craze where every child wanted really expensive energy drinks because of the sort of social media push. I found that really, really bizarre, and it really took off! My daughter lives in Singapore, and she says, while they don't snack on like sweets and crisps, they have high calorie energy drinks, all these boba teas, milkshakes, very fancy looking drinks. And I absolutely see this craze coming in here in the teenagers. I don't know how to stop it, if you've got any idea. This has become very political, putting a tax on sugar, and I still fail to see why. Because we tax alcohol. This is basically the alcohol addiction of children and young people.

Peter: Emma, I totally agree, and I think we need to, you know, look at the evidence that the soft drinks industry levy actually had an impact on oral health, in that it reduced the need for general anaesthetics for dental care. As, you know, as the work by Nina Rogers has shown. And so that's really important. I think also it's that we sometimes look at it as an adult, as opposed to a child. And if we can look at it from a child's point of view, having toothache is rotten and having a significant impact on their quality of life and their ability to go to school and have a good wider engagement with wider activities.

Emma: Yeah. Okay, so sugar is evil. We've agreed on that. In fact, we need to start disagreeing. There's too much agreement going on here!

Peter: Emma, at an individual level, we try and keep, certainly, the advice we give parents, very simple, and that's very much to say, pretty much all food, apart from water and milk, have sugar in. And therefore, it's trying to resist snacking, and trying to have your meals in three or four groups, and allow your teeth some time to recover afterwards, and that last

hour before bedtime to avoid sugary foods and drinks and overnight, if the child wakes up or needs a drink in the middle night, then the safe drink is water,

Emma: Yeah, and this absolutely chimes with all the evidence on obesity that don't snack, have three meals, try not to eat processed foods, try not to eat sugars, drink water. I spend my life in clinic, telling everybody this message, drink water, drink milk, don't snack. I usually say, by this point the children look like they hate me, and everybody is like making faces at me, and I say to them, my children are allowed treats on Friday. Friday is the end of the week, it's treat day. They can choose a treat on Friday. And they're like, do you mean just once a week? And I'm like, yeah that's the world we live in.

Right. So, sugar tax. I mean, I find it shocking that we haven't done this earlier. I find it shocking the impact of the soft drinks industry and if I'm being honest, and this will heavily be cut now, I find it shocking the influence they've had. And I'm just going to leave it there.

We've just got time to touch on fluoridation. Why this is helpful? What's the evidence that can reduce dental decay?

Peter: Water fluoridation, new government legislation means that the powers around water fluoridation are now held centrally, and like sugar taxes, it is a central government decision. So, some parts of the country, fluoride occurs naturally in the water, and up to one part per million is where the evidence is to show it's effective and it reduces tooth decay. In other areas of the country, such as Birmingham and Newcastle, they are fluoridating the water to achieve what is already achieved in some of those natural areas. And there is strong evidence between those, between when you compare Newcastle and Birmingham and other parts of the country, of an improvement in children's oral dental health as a result of that fluoridation and less need for that dental care under general anaesthetic and less dental decay.

Emma: Fascinating. I didn't know that some places had enough fluoride in the water naturally, and basically, you're just supplementing it in the areas with low level fluoride. So, why is anybody ever making a fuss about fluoride? It's like the anti-vaxxers. I'm just going to say it. And this surprises me, if it's there naturally, what is all the fuss about? Because there's a kind of anti-fluoridation lobby that I view as similar to the anti-vaccination lobby that seems to get a lot of airtime and has little evidence. But tell me, tell me a little bit about this.

Peter: Emma, I agree with you, there is a recent government report out in the last few weeks, which again reassures and confirms the safety of water fluoridation both in the benefits of the dentition, but also the wider concerns which people raise, and the lack of evidence that this water fluoridation does any harm.

Emma: Great. Okay, so we've solved that one! You told me you wanted two minutes to talk about something more important than fluoridation.

Peter: So, these are mid-level community interventions where we're trying to integrate the child workforce to support oral health as they do many other public health messages, and that's working with key people like health visitors, family hubs, schools, and nurseries.

Emma: Absolutely, and I think that you're right, there has been a divide between what happens to the school and what happens in public health and what happens in hospitals and primary care, and actually, we're all singing from the same hymn sheet. We've all got the same message, and we need to work together and pull together, and especially through something as simple and effective as cleaning children's teeth.

So, Peter, one of the things that is a real issue with adults is people say they can't find the dentist, or they can't get on to a dentist, or they can't get on the waiting list for a dentist. So, tell me about dental access to children. Is it a problem?

Peter: Yes. We know, the latest figures show that only half of children go on a regular basis, and we need, as our report explains, to try and reorientate dental service to be more preventative focussed, but that importance of early access to enable us to diagnose early and treat early if there is decay, and, more importantly, support the families to integrate those oral health behaviours at home, because that's the most important behaviours are what's happening at home.

Emma: So, you're telling me that 50% of children don't go to the dentist, but actually, visiting the dentist is free for children.

Peter: Emma, you're quite right. Dental access for children is free. And as a national society, British Society of Paediatric Dentistry, they would like to get that regularity of dental attendants, from their first birthday onwards so we can get those preventive habits in, and you go and have simple and easy visits, because there is no pathology, and it is a joyous visit for everybody, because it's positive and it's simple, and the child develops these good routines and supports the wider family.

Emma: And that's actually true. As I was telling you, I still have four children, and my life's achievement is that I managed to get my children well, they're not all yet 18, but so far up to the age of 18, none of them had a hole.

Peter: Emma, that's fantastic. And we know that, you know, for children across many areas of society, that is what we should be aiming towards, and many Scandinavian countries achieve it.

Emma: What is the problem? Because there aren't enough dentists, or it's too difficult to get to the dentist for children? Why? Why are they not going?

Peter: I think it's a number of things. I think access is a challenge, and obviously there's a whole wider piece of work around dental contracts and dental workforce. National funding for dentists is stagnant and hasn't risen as other areas of the NHS have.

Emma: You've told me that actually national funding is stagnant, but funding is now devolved to ICBs (integrated care boards), so it's up to your local area or region to decide how they want to provision dental health. So, what does that mean?

Peter: So, this is a really exciting opportunity, because it's got that local control, enabling the integrated care board to choose where it locates dental services, to improve access. And also, there's an example within the Yorkshire region, where it can prioritise access to certain vulnerable groups, such as those children with additional needs.

Emma: Fantastic. Okay, last off, when I was a child, and when we lived in New Zealand, we had school dentists, and the school dental bus came. It parked up for a week. Every child in the class went in. They had a nice time. They were supported by the teachers. They got their free dental care. It was all on site. It was so efficient. Can I just say, why don't we have school dentists again? School dental bus?

Peter: Emma, you've opened a large conversation there. So, working in Keighley with our app locally group, you know, schools have raised the question, like many other health services, why can't we bring health services into schools? And I think in some settings, certainly where access to local dentists is quite challenging or quite far away, then that might be a way forwards. But where a dentist is, say, co-located five doors down the road, and you've got a 10-surgery dentist, it is far more efficient and effective to deliver dentistry over 10 surgeries, than it is in one surgery with all the challenges around transport, sterilisation and everything else.

Emma: Sure. Okay, fascinating. I think I'll move back to New Zealand!

Peter: That said in schools, there are certainly opportunities around the preventative piece are very important and certainly should be delivered in schools, the dental services, some of the things that we're working with in Keighley is trying to get that relationship between schools, because what schools were finding was one of the many causes for children being off school is dental reasons, and that working between dental practices and schools and almost allowing schools to prioritise those children most in need because of their loss of education, to be able to access that dental service.

Emma: Fantastic. It's been a real pleasure talking to you today, and it's made me think a lot about oral health, the state of children's teeth, and what we can do about it. You have one minute to give us your top tips. So, what are your top tips?

Peter: So top tips for children's dental health are three things. One is brushing twice a day with fluoride toothpaste, limiting sugary foods and drinks, and water and milk are the only safe drinks and regular dental visits, are my three top tips. I can go into more details on all of them, but that's my headline figure.

Emma: That's brilliant, and I absolutely agree. And for me, I'd say, don't snack, don't rinse your face cream off or your toothpaste off, and drink water. And also, I love the idea that we should work with the ICBs, the integrated care boards and education to all be using these health messages and promoting such a simple preventative health issue as one group, because we all believe the same things. We spent too long agreeing today. So, we just ought to all work together.

Peter: And I think integration is the way forward, Emma and you know, as a child workforce, having a dentally healthy child population is as important as many other aspects and improves the child's quality of life.

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