An exploratory study investigating the barriers to reporting child dental neglect concerns among general medical practitioners in Greater Manchester

Layla Whyatt and Siobhan Barry*

**Key points**
- Investigates the gap between the suspicion and referral of child dental neglect.
- Explores the common barriers faced by general practitioners to reporting child dental neglect concerns.
- Highlights the demand for further child protection training among general practitioners.

**Abstract**

**Introduction** Dental neglect presents a global concern and is a shared public challenge for all healthcare professionals, including general medical practitioners (GPs). Previous literature highlights a lack of training among GPs and suggests that barriers are present to reporting concerns of dental neglect.

**Aims** To investigate the current awareness of child dental neglect among GPs in Greater Manchester and to investigate barriers to the reporting of concerns.

**Methods** An anonymous, electronic questionnaire was distributed to GPs in Greater Manchester. Respondents reported their experience and training in child dental neglect and their management of suspected cases. Results were assessed using descriptive analysis.

**Results** In total, 25 GPs completed the questionnaire. It was found 60% received undergraduate child protection training and 96% completed postgraduate training. Only 20% felt adequately trained in the referral of suspected child dental neglect and the majority acknowledged that more training is required. Furthermore, 42% had been suspicious of child dental neglect; however, only 80% recorded their observations. Plus, 32% had suspected child dental neglect and not completed a referral. Common barriers to reporting included lack of knowledge of referral procedures and lack of certainty of diagnosis.

**Conclusion** Barriers to referral of suspected cases of neglect were reported and there is a demand for further training among GPs.

**Introduction**

Dental neglect is an unfortunately common occurrence in the paediatric patient and can be an indicator of wider child maltreatment. Children may suffer from dental pain, poor nutrition and compromised social skills, with the impact on quality of life being carried into adulthood. In 2005, child dental neglect was seen at least once daily by 60% of UK dentists and 50% of 15–16-year-olds in deprived inner-city schools possessed neglected dentitions. The high prevalence of dental neglect also extends beyond the UK, with 61.5% of Health Service Executive dentists in Ireland in 2017 witnessing dental neglect at least once weekly. Until relatively recently, dental neglect was not well recognised within child protection. Awareness has since grown and there is an increasing appreciation throughout the world that dental neglect may be both the sole presentation and an indicator of general child neglect. It is the duty of healthcare professionals to act at the earliest suspicion of dental neglect to help protect children from further harm.

While dentists play an important role in the identification of dental neglect, intervention is a shared public challenge reliant on all healthcare professionals, including general practitioners (GPs). GPs have a greater interaction with preschool children than dentists and, in cases of dental pain, are often the first point of contact. In 2016/17, only 3% of children in England had visited a dentist by their first birthday and only 12% by their second birthday. It is for this reason that GPs may play a vital role in the recognition of dental neglect; their ready access to the infant and toddler population provides the opportunity for oral health assessments before many children have attended their first dental appointment.

A study conducted in North Carolina highlighted the influence that GPs can have on the general health of young children by recognising those who need to be seen by a dentist. This study also concluded that oral screenings can be easily introduced to busy practice. Despite this, healthcare providers, such as GPs, tend to under-identify carious teeth and when they do, tend to under-refer. The authors reported that only 70% of children with identified dental disease received onwards referral to a dental practice.

---

1 Dental Core Trainee 1, Oral and Maxillofacial Surgery, Mid Yorkshire Trust, UK; 2 Professor and Honorary Consultant in Paediatric Dentistry, University of Manchester, UK; 3 University Dental Hospital Manchester, Manchester, UK.

*Correspondence to: Layla Whyatt Email address: siobhan.barry-2@manchester.ac.uk

Refereed Paper.
Submitted 28 February 2022
Revised 13 June 2022
Accepted 23 June 2022
https://doi.org/10.1038/s41415-022-5221-7
professional, which suggests that barriers are present in the identification and referral of dental neglect presented to GPs.11 Previous research has demonstrated a lack of awareness and training of GPs about dental neglect. A questionnaire study found that 96% of GPs in the Isle of Wight had never received dental training and most had never communicated with a dental professional regarding a paediatric patient.12 Furthermore, 95% of paediatric postgraduate speciality trainees in the UK reported not receiving training in oral assessment, with 61% rating their ability as below average when assessing the oral health of preschool children.8

Despite doctors displaying an interest in patients’ dental issues,13 insufficient dental knowledge has been highlighted as a major barrier leading to the hesitation of non-dental healthcare professionals assessing children’s oral health.2 Moreover, a study by Anderson reported that the prescription of antibiotics for acute dental problems is more common among GPs than general dental practitioners (GDPs), despite this being ineffective in the absence of dental treatment.14 This further highlights a lack of dental knowledge among GPs.

There is currently limited research regarding the role of GPs in the recognition and management of dental neglect in the UK and a need for further research has been highlighted.1 A lack of communication with dentists, coupled with doctors’ limited oral health knowledge potentiates the poor management of dental neglect, with the possibility of child maltreatment being missed. Therefore, the aims of this research were to investigate the current screening for child dental neglect among GPs in Greater Manchester and to explore the barriers to the reporting of dental neglect concerns.

Methods

An anonymous, electronic questionnaire was created using the online Select Survey tool. The 31-point questionnaire consisted of sections investigating: participant demographics, safeguarding training, experience of child dental neglect in practice and barriers to reporting concerns. The questionnaire was based on previously published surveys.12 A combination of quantitative and qualitative data collection was used to investigate the GPs’ awareness and experience of child dental health and neglect. Ethical approval was gained from the University of Manchester Research Ethics Committee and consent to participate was obtained from participants.

The questionnaire was piloted by sending it electronically to ten GPs working in Greater Manchester and this informed the final questionnaire design. Once finalised in January 2021, the questionnaire was sent to the commissioners of medical services in Greater Manchester, who distributed it via email to their list of general practices. This gave a convenience sample of 100 GPs. A reminder email was sent eight weeks later and the questionnaire closed after 12 weeks. Results were downloaded and assessed using descriptive analysis. Qualitative data were assessed thematically. Recurrent patterns of meaning were identified, analysed and interpreted using an inductive approach. Results were presented in group format.

Results

Participant demographics

In total, 25 questionnaires were completed, giving a 25% response rate. All responses were included in the analysis of results. The average year of graduation was 1998 (range 1986–2015) and 100% of respondents treated NHS patients only.

Table 1  Perceived features of concern regarding child dental neglect (n = 25)

| Feature                                | Number (n) | Percentage (%) |
|----------------------------------------|------------|----------------|
| Irregular attendance at the dentist    | 20         | 80             |
| Repeat general anaesthetic for dental treatment | 14 | 56             |
| Emergency appointments at your practice for dental pain | 21 | 84             |
| Severely untreated dental caries obvious to the lay person | 24 | 96             |

Table 2  Who GPs would refer to if concerned about a child suffering from dental neglect (n = 25)

| Referral                                      | Number (n) | Percentage (%) |
|-----------------------------------------------|------------|----------------|
| Manchester safeguarding children’s board      | 17         | 68             |
| Community dental services                      | 5          | 20             |
| Paediatric dental consultant                  | 1          | 4              |
| National Society for the Prevention of Cruelty to Children | 1 | 4              |
| GDP                                           | 13         | 52             |
| Safeguarding lead                             | 2          | 8              |
| School nurse                                  | 3          | 12             |
| Health visitor                                | 4          | 16             |

Training

Overall, 60% of respondents had received formal child protection training at undergraduate level and 96% had completed some form of child protection training following their undergraduate medical degree. Despite this, 64% of respondents did not feel adequately trained to recognise the signs of child dental neglect and 80% were not confident in the mechanisms of escalation and referral of a suspected case. A demand for further training was highlighted among the respondents. Moreover, 88% reported that GPs require more guidance and training on child dental neglect, with 76% believing that this should take place at undergraduate level.

General knowledge

All respondents were familiar with their practice policy for child protection: 96% knew their practice safeguarding lead and 64% percent were aware of the local area child protection committee procedures. The GPs’ perceptions of the factors giving concern regarding child dental neglect are highlighted in Table 1.

Experience

In total, 44% of respondents reported that they had been suspicious of child dental neglect in the past five years, with the number of cases ranging from 1–20. Of those who had suspected...
child dental neglect, 80% had documented their findings in the clinical notes. Additionally, 32% percent of respondents admitted to suspecting a case but not completing an onwards referral. Only 68% of those who did not refer a suspected case made full clinical notes on their suspicions. Furthermore, 68% of those who were suspicious of dental neglect would discuss their findings with another colleague. Table 2 demonstrates who the GPs would refer to if concerned about a child suffering from dental neglect.

Barriers
The GPs were questioned on the potential factors which may influence their decision to refer a suspected case of child dental neglect, as demonstrated in Figure 1. The most common reasons were lack of certainty of diagnosis (84%) and lack of confidence in their suspicions (84%). Lack of knowledge of referral procedures was also commonly reported, with 72% of GPs selecting this option. Other documented factors included limited time in consultation, fear of disrupting relationships with parents and the perception that dental issues are outside GPs’ scope of practice.

Attitudes
In total, 44% of respondents believed that GPs are well placed to recognise behaviour and signs of child dental neglect and 84% were willing to get involved in its detection. The respondents’ attitudes towards the detection of child dental neglect are highlighted in Figure 2.

The GPs were also invited to leave any further comments they had regarding child dental neglect in general medical practice, from which three main themes were highlighted.

The first was training. The GPs acknowledged that further training is required and completing the questionnaire had brought this to their attention:
- ‘Completing the questionnaire has made me think already. Yes – we need more training. We have a lot in general child safeguarding – detection and escalation – but not specifically teeth’
- ‘Dental neglect in children does not have prominence in the safeguarding training I have received’
- ‘We get regular child protection training, so I can’t see why teeth are not mentioned!’

The second involved the recognition of child dental neglect and how the COVID-19 pandemic has impacted its detection:
- ‘Dental neglect is, I think, not looked for enough in primary care, speaking as safeguarding lead for my practice. Training would be very helpful’
- ‘The situation has been complicated by COVID-19 as we are not seeing as many children face-to-face’

The third was the awareness of dental neglect as an indicator of general child neglect and the perception that its detection is solely reliant on the dentist:
- ‘There is a need to heighten awareness of dental neglect as a warning sign for broader issues of neglect. But it is a sensitive issue to tackle with any parent’
- ‘Perception that this is a dentistry and not a medical issue – why are dentists not sorting this issue out?’

Discussion
The main finding of this study was the distinct gap between the suspicion and referral of child dental neglect among GPs. The potential for dental neglect to be a marker for wider neglect in children would appear to be underestimated. Coupled with a strong demand for training, this indicates that further support and guidance surrounding child dental neglect may be required.

While almost all respondents in this study had completed some form of child protection training, the majority were not confident in the recognition and referral of a suspected dental neglect case: 64% of respondents did not feel adequately trained to identify the signs of child dental neglect and 80% were not confident in the subsequent mechanisms of escalation. This may suggest a limited emphasis on dental health during the safeguarding training received by the GPs. The apparent lack of focus was reflected in one respondent’s comments, who stated that there was ‘no priority given to teeth’ during their child protection training. A study completed in the Isle of Wight further demonstrated this, in which 96% of GPs reported never having received formal dental training and only 43% felt confident in detection of dental problems.12

The British Dental Association consider dental neglect as an indicator of broader neglect in children.1 Therefore, it could be argued that doctors should be well informed on the identification and referral of a suspected dental neglect case. Education is essential in the safeguarding of children and 88% of participants in this study agreed that more guidance is required.
Also, 68% of GPs who were suspicious of dental neglect would discuss their findings with another colleague. Communication is a vital element of safeguarding and the impact of poor correspondence between healthcare professionals is consistently reported in national inquiries into child abuse.1 Of those who were suspicious of child dental neglect, however, 32% did not complete an onwards referral. The gap between suspicion and referral is well documented in the literature on an international scale and has also been identified among GDPs.15,16,17,18 In order to bridge this gap, the barriers faced by clinicians to the referral of a suspected case must be explored.

The most common barriers to reporting concerns found in this study were lack of certainty of diagnosis and lack of confidence in suspicions. More specified dental training may help to raise awareness of the features of concern and enhance GPs’ confidence in the identification of dental neglect. Lack of knowledge of referral procedures was a barrier reported by respondents, which is also an area that could be tackled with further training.

When compared to the barriers to reporting safeguarding concerns faced by GDPs, those found by GPs in this study were similar.18 This reinforces the collective need for further child protection training.

Fear of disrupting relationships with parents was also identified as a factor influencing the decision of referral. While the doctor-parent relationship is fundamental in the health care of children, it should not hinder the ability to act in the best interests of the patient. If escalation of concerns is required, it should be clarified that the basis of referral is not to initiate blame but to offer support for parents. As reported in multiple serious case reviews, it is failure to act which often results in the most serious consequences.1

The National Institute for Health and Care Excellence regard the persistent failure to obtain treatment for a child as a feature of concern for dental neglect.19 In particular, the requirement of repeated general anaesthesia for dental extractions is recognised.1 While it must be acknowledged that not all children with a poor dentition are neglected, the need for repeated hospital admission for the extraction of carious teeth presents serious concern. Only 56% of GPs regarded repeated general anaesthesia for dental treatment as a factor of concern regarding child dental neglect. This further highlights the lack of confidence in the detection of dental neglect, as well as of the consequences of poor oral health on the general wellbeing of a child.

In the management of dental neglect, it is recommended that doctors should be routinely examining the mouths and teeth of children.20 In this study, however, some GPs expressed that they do not have the time or hold the responsibility to do so. When questioned on the factors influencing the decision to refer, comments from respondents included ‘limited time in consultation’ and the belief that dental neglect is ‘a dental issue and outside our remit’. One respondent reported that they would not refer a suspected case ‘if the child was otherwise well cared for’, which may imply the normalisation of neglected dentitions among their patients.

While the view was expressed that the responsibility for oral health lies with the dentist, it must be stressed that GPs are not expected to diagnose dental decay but to recognise the possibility for neglect and enlist the appropriate support.21 Examining the mouth of a child permits an opportunity for signs of dental neglect, along with wider neglect, to be identified. GPs are often the first point of contact for health and a degree of passivity should not be the reason why child neglect goes undetected.4

The reduction of contact with medical professionals throughout the COVID-19 pandemic has resulted in fewer opportunities for the identification of dental neglect. One respondent commented that ‘the situation has been complicated by COVID-19 as we are not seeing as many children face-to-face’. This limited ability to fully assess a child’s oral health has compromised the recognition of potential neglect and the pandemic should therefore be considered as a barrier to the referral of cases. Furthermore, there is widespread acknowledgement of the increase in child neglect during the COVID-19 pandemic.22 This has arguably elevated the need for all clinicians to examine children’s mouths. It is essential now more than ever that opportunities are not wasted and that children suffering from dental neglect are not lost in the noise of the pandemic. GPs have been at the forefront of the NHS’s response to COVID-19 and already face many responsibilities. However, if as their role as frontline workers, GPs are to appropriately manage child neglect, they require sufficient knowledge of the signs of dental disease. This study highlights that this is not currently the case and further training on the identification and impact of child dental neglect may be required.

A limitation of this study was the low response rate from participants. It is therefore difficult to confirm whether these views are indicative of GPs as a whole. It is possible that those GPs who did not respond felt more confident in this area. However, it may also indicate a level of apathy among GPs regarding the questionnaire and even the topic in general. Having said this, the high level of consensus in responses are suggestive that these are likely universally held views. The views that dental neglect is a ‘dental issue and outside our remit’ and ‘does not have prominence in the safeguarding training I have received’ portray the lack of emphasis placed on dental neglect by GPs and during their training. Low response rate is a challenge, well reported in questionnaire-based studies.23 The questionnaire was completed electronically and was distributed to participants via email. This is a cost-effective approach in comparison to traditional modes of administration. It is evident that the distribution method utilised in this study was not optimal and there is evidence to suggest that combining electronic and postal methods can optimise response rates.24 While the validity of this study as a true representation of GPs’ responses to dental neglect may be limited, the results can be deemed as exploratory in nature and highlight a need for further research on a national scale.

Conclusion
This study demonstrates the gap between the suspicion and referral of child dental neglect cases among GPs. Although a lack of awareness surrounding child dental neglect was highlighted, GPs felt that they were well placed to recognise the signs and were willing to get involved in its detection. Barriers to the referral of suspected cases are still commonly reported and there is a strong demand for further support and training among GPs. There is also a need for further research on a wider scale into the awareness and attitudes towards child dental neglect among GPs throughout the UK, as well as how these views may develop over time.

Acknowledgements
We would like to thank all the GPs who participated in this study and took the time to complete the questionnaire.

Ethics declaration
The authors declare that they have no conflict of interest.
Ethical approval was gained from the University of Manchester Research Ethics Committee and consent to participate was obtained from participants.

Author contributions
Layla Whyatt and Siobhan Barry contributed to study conception and design, data collection, analysis and interpretation of results and draft manuscript preparation. Both authors reviewed the results and approved the final version of the manuscript.

References
1. Committee of Postgraduate Dental Deans and Directors. Child protection and the dental team: an introduction to safeguarding children in dental practice. 2006. Available at https://bda.org/childprotection/Resources/Documents/Childprotectionandthedentalteam_v1_4_Nov09.pdf (accessed November 2022).
2. Bradbury-Jones C, Innes N, Evans D, Ballantyne F, Taylor J. Dental neglect as a marker of broader neglect: a qualitative investigation of public health nurses’ assessments of oral health in preschool children. BMC Public Health 2013; 13: 370.
3. Harris J C, Elcock C, Sidebotham P D, Welbury R R. Safeguarding children in dentistry: 2. Do paediatric dentists neglect child dental neglect? Br Dent J 2009; 206: 465–470.
4. Sarri G, Evans P, Stansfeld S, Marenes W. A school-based epidemiological study of dental neglect among adolescents in a deprived area of the UK. Br Dent J 2012; DOI: 10.1038/sj.bdj.2012.1042.
5. Crowley E, Byrne G, Duane B. The prevalence of neglected dentitions in children as perceived by HSE primary care dentists in Ireland. J Br Dent Assoc 2018; 64: 139–144.
6. Welbury R. Child protection – raising the awareness of dental neglect. Contemp Clin Dent 2014; 5: 149.
7. Bhatia S K, Maguire S A, Chadwick B L et al. Characteristics of child dental neglect: a systematic review. J Dent 2014; 42: 229–239.
8. Kalkani M, Ashley P. The role of paediatricians in oral health of preschool children in the United Kingdom: a national survey of paediatric postgraduate specialty trainees. Eur Arch Paediatr Dent 2013; 14: 319–324.
9. Dreksheta R, Priyadharsini P. Knowledge, attitude and perception of oral diseases presenting to general medicine practitioners. J Pharm Sci Res 2019; 11: 2133–2138.
10. Salomon-Ibara C C, Ravaghi V, Hill K, Jones C M, Landes D P, Morris A J. Low rates of dental attendance by the age of one and inequality between local government administrative areas in England. Community Dent Health 2019; 36: 22–26.
11. Pierce K, Rozier R G, Vann W F Jr. Accuracy of paediatric primary care providers’ screening and referral for early childhood caries. Paediatrics 2002; DOI: 10.1542/ peds.109.5.e82.
12. Colgan S M, Randall P G, Porter J D H. ‘Bridging the gap’ – A survey of medical GPs’ awareness of child dental neglect as a marker of potential systemic child neglect. Br Dent J 2018; 224: 717–725.
13. Olive S, Tutfhill D, Hingston E J, Chadwick B, Maguire S. Do you see what I see? Identification of child protection concerns by hospital staff and general dental practitioners. Br Dent J 2016; 220: 451–457.
14. Anderson R, Calder L, Thomas D W. Antibiotic prescribing for dental conditions: general medical practitioners and dentists compared. Br Dent J 2000; 188: 398–400.
15. Saxe M D, McCourt J W. Child abuse: a survey of ASDC members and a diagnostic-data-assessment for dentists. ASDC J Dent Child 1991; 58: 361–366.
16. Kilpatrick N M, Scott J, Robinson S. Child protection: a survey of experience and knowledge within the dental profession of New South Wales, Australia. Int J Paediatr Dent 1999; 9: 153–159.
17. Uldum B, Christensen H N, Welbury R, Poulsen A. Danish dentists’ and dental hygienists’ knowledge of and experience with suspicion of child abuse and neglect. Int J Paediatr Dent 2010; 20: 361–365.
18. Clarke L, Chana P, Nazzal H, Barry S. Experience of and barriers to reporting child safeguarding concerns among general dental practitioners across Greater Manchester. Br Dent J 2019; 227: 387–391.
19. National Institute for Health and Care Excellence. When should I suspect or consider neglect? 2019. Available at https://cks.nice.org.uk/topics/child-maltreatment-recognition-management/recognition/neglect/ (accessed December 2021).
20. Harris J, Whittington A. Dental neglect in children. Paediatr Child Health 2016; 26: 478–484.
21. UK Government. Working Together to Safeguard Children A guide to inter-agency working to safeguard and promote the welfare of children. 2018. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942454/Working_together_to_safeguard_children_inter_agency_guidance.pdf (accessed November 2022).
22. NSPCC Learning. Isolated and struggling: social isolation and the risk of child maltreatment, in lockdown and beyond. 2020. Available at https://learning.nspcc.org.uk/media/2246/isolated-and-struggling-social-isolation-risk-child-maltreatment-lockdown-and-beyond.pdf (accessed November 2022).
23. Hardigan P C, Popovic I, Carvajal M J. Response rate, response time and economic costs of survey research: A randomized trial of practicing pharmacists. Res Social Adm Pharm 2016; 12: 141–148.
24. Basker Q S, Austin J D, Balasubramanian B A. Survey strategies to increase participant response rates in primary care research studies. Fam Pract 2021; 38: 699–702.