

The prevalence of neglected dentitions in children as perceived by HSE primary care dentists in Ireland

PRÉCIS

HSE primary care dentists reported seeing neglected dentitions in children very often. More resources for oral health services, greater guidance and more multidisciplinary involvement are required.

ABSTRACT

Statement of the problem: Children presenting with neglected dentitions still remains a common occurrence in paediatric dentistry. Dental neglect has comparatively recently been recognised as a child protection issue. Lack of access to services and oral health improvement programmes, along with cultural and educational barriers, contribute to the majority of neglected dentitions observed in children. Dentists need to be aware that a small proportion of children may suffer dental neglect because of parental neglect and will require appropriate follow-up. Awareness of dental neglect is important to help improve the oral health of the most vulnerable children in our society.

Purpose of the study: To report the prevalence of neglected dentitions in children, as perceived by HSE primary care dentists in Ireland.

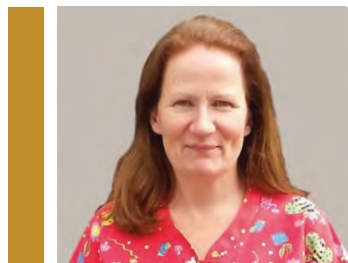
Materials and methods: Two cross-sectional surveys using web-based anonymous questionnaires were sent to all HSE primary care dental managers (n=17) and all HSE senior and general dentists (n=239) in Ireland.

Results: Some 64.7% (n=11) of managers and 28% (n=67) of HSE dentists returned questionnaires. A total of 61.5% (n=40) of the HSE dentists who responded (n=65) reported seeing neglected dentitions at least once a week in their clinics. In all, 38.7% (n=24) of dentists who responded (n=62) reported seeing children a great deal or a moderate amount of the time, with neglected dentitions, who presented late with a serious dental problem. HSE dentists and their managers requested more resources for oral health, a more targeted approach, greater guidance and more multidisciplinary involvement in order to assist in managing children with neglected dentitions.

Conclusions: Neglected dentitions in children are observed often by HSE primary care dentists in Ireland.

Key words: dentist; public dental service; HSE; reporting; child protection; abuse; dental neglect; neglected dentitions.

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Introduction

Dental neglect is defined in the UK as “the persistent failure to meet a child’s basic oral health needs, likely to result in the serious impairment of a child’s oral or general health or development”.¹ Failure or delay in seeking care, complying with and completing treatment, and providing basic oral care, resulting in suffering of the child, e.g., pain, swelling, dental disability, malocclusion or social isolation, are common definitions of dental neglect in the literature.²⁻⁴ Many of the consequences of dental neglect as a child are carried into adulthood.⁴

Before a case of dental neglect can be determined, parents of children with neglected dentitions must have the ‘ability’ to access oral health services (which is often dependant on finances) and to access and benefit from oral health information (often dependant on educational levels).^{5,6} There are also differences in the legal and cultural definitions of abuse and neglect between countries, which may affect the awareness of abuse and neglect by health and other professionals.⁵

Dental neglect has only recently been recognised as a child protection issue.⁷ Dental neglect “may occur in isolation or may be an indicator of a wider picture of neglect or abuse”.^{1,8} Reporting of dental neglect seems to be a rarer event than reporting of general child abuse and neglect.⁷ Part of the reason for this is that dental decay is a very common condition among children.⁶ In addition, there appears to be no threshold of dental caries/decay or other oral health disease above which dental neglect can clearly be established.⁹ Several factors, including parental interest in oral health, attendance for appointments, access to services and compliance with preventive advice at home have to be taken into consideration before making a report of dental neglect.^{2,3}

Observing neglected dentitions is a very common experience in paediatric dental practice.⁶ In 2005, in a UK study, nearly 60% of respondents reported seeing neglected dentitions once daily or more often.¹⁰ Although seeing children with neglected dentitions may be a daily occurrence, when it is suspected to be caused by neglect, it is often not acted upon. The presence of a neglected dentition might be perceived to be a normal event.¹⁰

The prevalence of dental caries in five-year-old children in Ireland is high, with the average five year old in fluoridated areas in 2002 having 1.3 decayed, missing or filled primary teeth (dmft) due to dental decay.¹¹ Research found that the mean dmft of five year olds in the top 33% of decay experience was 3.7, 185% higher than the average child.¹¹ Although the above data is from 2002, it is the last oral health survey of children in Ireland. However, the indication is that the oral health of Irish children has not improved substantially over the past 15 years, especially for those from low socioeconomic backgrounds.¹² In addition, free access to oral health services in Ireland for children is still very limited, with no nationally directed oral health promotion programmes.¹³

The only reference that was found in connection to dental neglect in children in the Irish setting was from the Irish Oral Health Assessment Guideline.¹⁴ In this guideline, it was advised that as part of any dental examination: “The dentist must always be alert to the possibility of non-accidental injury, dental neglect or other indicators of possible child abuse, and should be familiar with national guidance for the protection and welfare of children”.¹⁴

The Health Service Executive (HSE) primary care salaried dentist is the only source of access to free dental care for children in Ireland. Access to comprehensive care is limited due to staffing levels.¹³ HSE primary care dentists have contact with at least 35% of children in Ireland every year.¹⁵ Their

Table 1: Total population, number who responded and response rate of HSE primary care dentists (senior and general grades) within each geographical region.

Region	HSE PRIMARY CARE DENTISTS		
	Total population (n)	Responses (n)	Response rate by region (%)
Dublin/North-East	56	15	26.8%
Dublin/Mid-Leinster	54	17	31.5%
South	70	25	35.7%
West	59	10	16.9%
All regions (national)	239	67	28.0%

observations on seeing neglected dentitions would provide a starting point to understand characteristics of children suffering dental neglect in Ireland. The aim of this study was to report the prevalence of neglected dentitions in children as perceived by HSE primary care dentists.

Materials and methods

Permission to conduct this study was obtained from the Health Services Management/Centre for Global Health Research Ethics Committee, Trinity College Dublin, in January 2017. In addition, approval was obtained from the HSE National Primary Care Research Committee and the Principal Dental Surgeon (PDS) Group (HSE primary care dental managers). Two web-based anonymous questionnaires were designed using the online survey creator SurveyMonkey. The questionnaires were designed using questions from similar international studies and piloted for the Irish setting.^{10,16} The first questionnaire (dental managers) was sent by email via the secretary of the PDS Group to all 17 integrated service area (ISA) clinical primary care dental managers in Ireland. The second questionnaire (HSE dentists) was sent via the secretary of the PDS

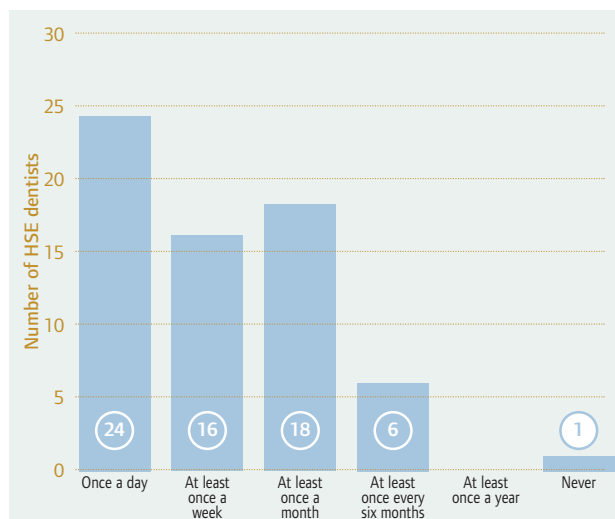


FIGURE 1: HSE dentists (n=65): “Approximately how often do you see children with neglected dentitions?” (Likert scale).

Group to each of the 17 ISA dental managers for distribution to all frontline primary care HSE salaried dentists (senior and general dentist grades) in Ireland (n=239). Each questionnaire was divided into two sections. Section 1 collected information regarding the reporting of child abuse and neglect prior to the introduction of mandatory reporting in Ireland in December 2017 (this data is not presented in this paper). Section 2 collected information on the observation of neglected dentitions in children. It was not made compulsory to answer every question, so some questions could be skipped. Apart from the online link to the questionnaire, a PDF copy was attached to the invitation email, providing the option to participate using the ordinary postal service. A reminder email was sent two weeks following the initial invitation emails. Questionnaires were distributed in March 2017 and the survey was closed on April 24, 2017. Any questionnaires received by the postal route were entered by the researcher (Evelyn Crowley) into the SurveyMonkey database. The survey data collected were exported into SPSS computer software Version 24 for analysis.

Results

Dental managers' questionnaire

Eleven questionnaires were returned, one from the Dublin/North East region, three from the Dublin/Mid-Leinster region, three from the South region and four from the West. The response rate to this questionnaire was 64.7%.

HSE dentists' questionnaire

The exact number of HSE primary care dentists who were emailed the web link to the HSE dentists' questionnaire was not available to the researchers. The Office of Workforce Planning reported in April 2017 that there were 239 primary care senior and general dental surgeons employed by the HSE in the community services in 2016 (parliamentary question 8269/17). This figure was used in calculating the response rate to the HSE dentists' questionnaire. Some 67 valid questionnaires were returned. The response rate within each geographical region (Table 1) was 26.8% (n=15) in Dublin/North East, 31.5% (n=17) in Dublin/Mid-Leinster, 35.7% (n=25) in the South region and 16.9%

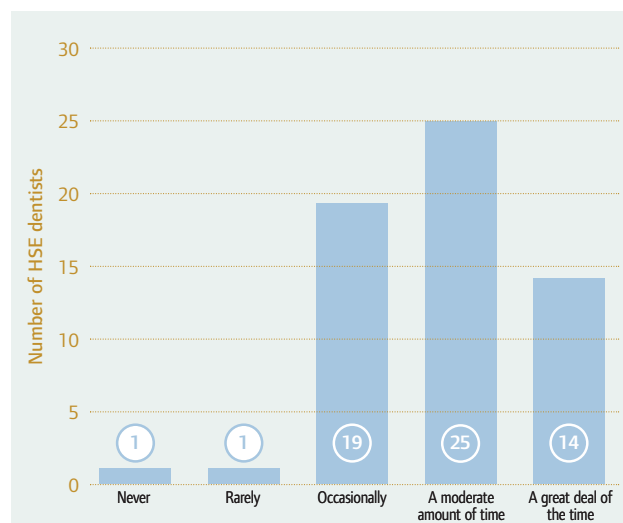


FIGURE 2: HSE dentists (n=60): "Approximately how often do you see children with neglected dentitions, who then fail to attend for follow-up treatment if offered? (Likert scale).

(n=10) in the West. The national response rate to the HSE dentist questionnaire was 28% (n=67).

What is the prevalence of neglected dentitions in children as perceived by HSE primary care dentists in Ireland

A total of 36.9% (n=24) of the HSE dentists who responded (n=65) reported seeing children with neglected dentitions at least once a day. A further 24.6% (n=16) reported seeing children with neglected dentitions at least once a week. In total, 61.5% of dentists reported seeing neglected dentitions at least once a week in their clinics (Figure 1). In all, 23.3% (n=14) of the HSE dentists who responded (n=60) reported that they perceived children with neglected dentitions to fail to keep scheduled appointments, a great deal of the time. A further 41.7% (n=25) said those children fail to attend for a follow-up appointment a moderate amount of the time (Figure 2). In addition, 38.7% (n=24) of the HSE dentists who responded (n=62) perceived seeing children either a great deal of the time or a moderate amount of the time with neglected dentitions, who presented late with a serious dental problem that any reasonable person would have recognised as needing professional dental attention earlier (Figure 3).

Open comments

Some of the open comments collected in the questionnaires reflect the attitude that a neglected dentition may be a silent form of neglect and does not get enough attention as such. In addition, it may not be recognised as neglect due to lack of awareness and the apparent low priority of oral health in our society:

"The neglected mouth arguably is the neglected child. Just because there is no wanton physical abuse, the consequences of passive dental neglect can arguably be more damaging, with pain and poor nutrition and missing developmental milestones. As it is hidden in a vulnerable population it doesn't get the attention it requires."

HSE dentist respondent

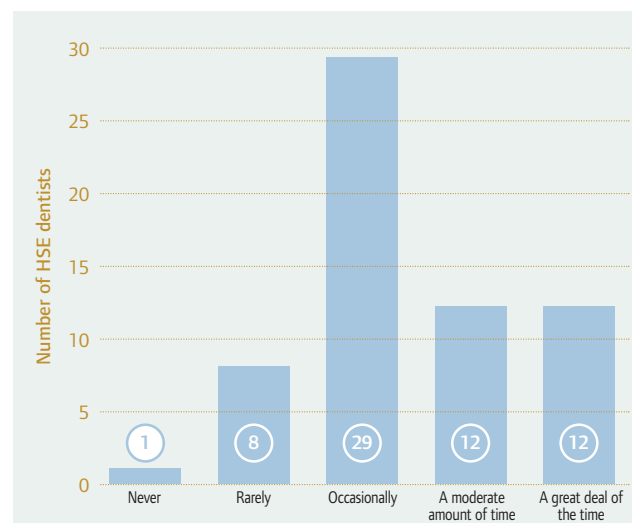


FIGURE 3: HSE dentists (n=62): "Approximately how often do you see children with neglected dentitions who present late with a serious dental problem that any reasonable person would have recognised as needing professional dental attention earlier?" (Likert scale).

Table 2: Responses given by dental managers and HSE dentists to the question: “When dealing with children with neglected dentitions, what would assist your role to improve their oral health?”

Response to questionnaire	1: dental managers (Q.14)		2: HSE dentists (Q.30)	
	n	%	n	%
More resources for dental services	10	90.9	52	77.6
A missed appointment policy with associated resources (whereby children who miss appointments are followed up)	9	81.8	37	55.2
Increased eligibility based on need rather than on target class	8	72.7	45	67.2
Improved communication with other health professionals	8	72.7	32	47.8
Raising awareness among dental staff of the possible child protection implications of dental neglect	8	72.7	32	47.8
Increased awareness of dental neglect by the Child and Family Agency (Tusla)	7	63.6	33	49.3
Feedback systems from the Child and Family Agency (Tusla) that involve dentists	7	63.6	21	31.3
Development of interactive skills (for example, motivational interviewing) with children and families	6	54.5	21	31.3
Child protection courses with a larger dental component	5	45.5	34	50.7
Improved communication with the Child and Family Agency (Tusla)	5	45.5	19	28.4
Undergraduate and postgraduate training	4	36.4	34	50.7
Improved communication with school staff	3	27.3	26	38.8
Wider promotion of courses and circulation of guidelines	2	18.2	23	34.3

“I don’t believe neglecting a child’s dentition is seen as child neglect or abuse in our society. There doesn’t seem to be awareness by parents, teachers or other healthcare workers that dental caries is preventable.”
HSE dentist respondent

Several of the open-ended comments suggest a growing awareness among the dental managers and HSE dentists of the need to improve the management of children with neglected dentitions:

“There is an urgent need to address the issue of dental caries/non-attendance as indicators of neglect. Also an urgent need to develop systems for information sharing between dental services and other health professionals.”
Dental manager respondent

“Clearer guidelines [are needed] on what to do with families who constantly fail to attend dental appointments and where there is urgent need.”
HSE dentist respondent

Only two out of the 11 oral health service areas reported having in-house guidelines in place in the area of dental neglect. Both the dental managers and dentists were asked, in regard to dealing with children with neglected dentitions, what would assist them in their role to improve their oral health? More resources for oral health services (including a more targeted approach and resources to implement a missed appointment policy) was the most

common response given both by the dental managers and the HSE dentists. Improved communication with other professionals, raising awareness of dental neglect among dental and social care staff, feedback systems involving dentists and training were other common responses (Table 2). The need for more resources for oral health services was reflected in the open comments section:

“Our staff is at half of our full complement, which has had a hugely detrimental effect on our service and results in many children never being examined.”
HSE dentist respondent

“While parents have a significant role to play in dental neglect, the restricted service available within the public system is also a form of supervised neglect on the part of the State. I regularly send patients away after treatment of pain with caries and subclinical infections in other teeth knowing that the families have no intentions or often no means to obtain additional care for their children.”
HSE dentist respondent

In the case of a dental neglect issue, 37.3% (n=25) of the HSE dentists responded that they would prefer to support the family to attend appointments rather than to report the case to authorities. This reluctance to report and the dilemmas involved are reflected in some of the open-ended comments by respondents:

“Where possible, parents/guardians should be supported to assist them in

accessing dental treatment for their children without involving Tusla/child protection services. Routine referrals to social workers may discourage parents [or] guardians from attending HSE dental [services] – a balance needs to be found [between] supporting parents who engage with the services and those who can't/won't and there is no alternative but to involve social workers."

Dental manager respondent

"Dentists are very cautious about involving child protection agencies. There needs to be a cultural shift from feeling that the results will be punitive to supporting families by alerting the authorities."

Dental manager respondent

Some open comments given by respondents during the survey reflect some of the barriers to reporting when dental neglect is suspected. One dentist spoke of the lack of awareness of dental neglect by social services: "Social workers don't see failed dental appointments as an issue even after IV [intravenous] antibiotics/admission and discharge against paediatric consultant advice".

Some respondents spoke of the need for multidisciplinary involvement and sharing of information:

"I feel that it would be helpful to have a definite confidential forum at which information could be shared with other professionals as a precursor to a full report. One might have some concern about dental care but the threshold at which a report should be made is not clear. However, if other professionals also had concerns and the concern was not isolated to just one area this would be helpful in making a decision."

Dental manager respondent

Discussion

In a study from the UK conducted in 2005, nearly 60% of paediatric dentists reported seeing neglected dentitions once daily or more often.¹⁰ In this study, only 36.9% of the HSE dentists reported seeing neglected dentitions at least once a day. However, paediatric dentists as surveyed in the UK study would normally be referred patients for specialist treatment by the equivalent HSE primary care dentist in the UK. Therefore, the UK participants in the 2005 study are more likely to see more severe cases and therefore report a higher prevalence of dental neglect. The differences in reported observation between the UK study and this study may also reflect improvements in oral health since 2005. However, there is no recent published Irish data to confirm this. In addition, differences in reported frequency of encountering neglected dentitions may also reflect cultural differences in caries/decay threshold levels above which a dentist would say a mouth was neglected or not. Nevertheless, despite a lower level of reporting by HSE dentists of seeing neglected dentitions than in the 2005 UK study, it is still concerning that in 2017, 36.9% of HSE dentists perceived seeing neglected dentitions at least once a day, with 61.5% reporting seeing neglected dentitions in children at least once a week. HSE dentists also reported seeing children with neglected dentitions who then fail to attend for follow-up treatment, either a great deal of the time (23.3%) or a moderate amount of the time (41.7%). An important component of preventing neglected dentitions in children and ensuring that children with high dental decay levels complete their treatment is the management of missed

appointments.^{17,18} A missed appointment policy to follow up on these children may improve attendance and thereby improve their oral health. This can involve reminding parents of their child's appointment, contacting the parents when an appointment is missed and rescheduling a new appointment, arranging a recall appointment and, when multiple appointments are missed, contacting social services.¹⁹

More of a concern is that 38.7% of HSE dentists (n=24) reported seeing children who present late with serious dental problems either a great deal of the time or a moderate amount of the time. Some children may be suffering with pain and infection, and for many reasons may not be able to access treatment.

The British Society of Paediatric Dentistry produced a policy document on dental neglect in children in 2009.¹ It included a number of recommendations on treatment provision, training and research to reduce the prevalence of dental neglect and put systems in place to safeguard children against dental neglect. These recommendations include:

- ensuring that children with neglected dentitions are prioritised for treatment and that a local system is in place to ensure rigorous follow-up of all children who have dental disease but who fail to attend for treatment appointments;
- more effective interdisciplinary work;
- improved communication with general medical practitioners and other healthcare professionals involved with the child; and,
- better planned service organisation, which considers the impact of changes on dentists' management of and intervention in dental neglect.¹

The results of this study indicate that Irish children may benefit from the implementation of similar recommendations here.

Recently, Jameson²⁰ emphasised the importance of sharing appropriate information on dental neglect with other health professionals. Ramazani *et al.*⁴ suggested that improving parents' knowledge on how to prevent dental decay and maintain a healthy mouth is essential to reduce dental neglect in children. They found that "educational programs to enhance public awareness, addressing the concern with parents and providing social worker counselling and working with families affected by dental child neglect seem promising".⁴ In addition, they found that public health nurses should have clear guidelines on child dental neglect and policies should be in place to ensure that children are not 'lost' to follow-up.⁴

The recommended age of a child's first visit to the dentist is before 12 months of age.²¹ However, in Ireland, the average age of a child's first visit to the dentist is between five and eight years of age.¹¹ Parents have limited free access in Ireland to a dentist both for treatment services and advice on how to maintain a healthy mouth.¹³ When children do present at a HSE dental clinic, it is difficult for the dentist to be able to distinguish between parental neglect and circumstantial neglect, whereby parents who want to access services and information cannot do so because of financial or other constraints. It was not possible in the scope of this study to explore the impact of limited access to dental services and oral health advice, and the contribution this has on the level of neglected dentitions HSE dentists are presented with. However, the most common things reported by HSE dental managers and dentists that would assist them in their role to improve children's teeth in Ireland were additional resources for oral health services, by way of increased access to services for all children and for those with high needs. In addition, resources to follow up with

children who miss appointments and improve communication with other health and social care professionals and school staff were advocated.

The low response rate from the HSE dentists (28%) could potentially introduce response bias, with those encountering neglected dentitions more regularly more likely to respond. It has to be acknowledged that HSE dentists operate in a variety of geographical locations with a wide cross-section of social and vulnerable groups. As a result, HSE dentists may have variable experiences of encountering children with neglected dentitions. However, this study, as a first of its kind, signals that a neglected dentition may be a common condition in children in Ireland and warrants further investigation and guidance.

Conclusion

HSE primary care dentists reported seeing neglected dentitions in children very often. They identified more resources for oral health, a more targeted approach, greater guidance and multidisciplinary involvement as being required to manage the needs of these children.

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