IN BRIEF

- The concept of negative consent for school dental screening is acceptable to parents, teachers and school nurses, but a recent change in guidance has put an end to this practice.
- Current follow up procedures to ensure screened positive children access dental care were felt to be inadequate.
- The interviewees believed that children's dental health is ultimately the parent's responsibility and not the responsibility of schools or health professionals.
- School dental screening is unlikely to be an effective tool to improve population dental health.
- Now is the time to consider if the statutory access to schools and the resources supporting this national programme could be more efficiently used for some other purpose.

# Dental screening in schools: the views of parents, teachers and school nurses

M. Tickle,[1] K. M. Milsom,[2] K. Buchanan[3] and A. S. Blinkhorn[4]

**Objectives** To obtain insight into the views of relevant 'stakeholders' (parents, teachers and school nurses) in dental screening in schools.

**Methods** Eight schools in Chester and Ellesmere Port in the UK formed the setting of this study. A teacher from each school participated in one-to-one interviews, and focus groups for parents were carried out in each school. A focus group for school nurses working in the locality was also held. The same trained researcher undertook the interviews and focus groups; all interviews and focus groups were tape recorded, transcribed verbatim and thematically analysed independently by two trained individuals.

**Results** Teachers, school nurses and parents all perceived the process of negative consent and the current dental examination as acceptable. The follow up procedure for identification of screened positive children was seen as inadequate. There was a strong feeling within each group that parents were ultimately responsible for their children's oral health and that state institutions had a limited role in ensuring children attended and received dental treatment.

**Conclusions** All of the groups considered it was primarily the responsibility of parents to take screened positive children to see a dentist. The NHS has limited influence on this process. This fact represents a significant challenge to improving the effectiveness of school dental screening.

[1]*Director of Research, Oral Health Unit of the National Primary Care R&D Centre, University Dental School of Manchester, Higher Cambridge Street, Manchester, M15 6FH; [2]Consultant in Dental Public Health, Department of Dental Public Health, Halton Primary Care Trust, Moston Lodge, Countess of Chester Health Park, Liverpool Road, Chester, CH2 1UL; [3]Research Project Manager, Department of Dental Research and Development, Halton Primary Care Trust, Moston Lodge, Countess of Chester Health Park, Liverpool Road, Chester, CH2 1UL; [4]Professor of Child Dental Health, Oral Health Unit of the National Primary Care R&D Centre, University Dental School of Manchester, Higher Cambridge Street, Manchester, M15 6FH
*Correspondence to: Professor Martin Tickle
Email: martin.tickle@manchester.ac.uk

Refereed Paper
Accepted 21 June 2006
DOI: 10.1038/sj.bdj.4814351


## INTRODUCTION

The World Health Organization recently supported screening of children for dental diseases and conditions in the school setting to help reduce costs of dental service provision and to support planning and provision of school oral health services.[1] Dental inspection of children in state maintained schools has been a statutory requirement in the United Kingdom since 1918,[2] a situation which is endorsed by new regulations issued in 2006.[3] This national programme has been historically coordinated by the community dental service (CDS); parents of children who are screened positive are contacted and advised that their child may benefit from further investigation; usually they are advised to take their children to a dentist working in the general dental service (GDS).

Therefore, the effectiveness of dental screening is heavily reliant on the parents of screened positive children to take their child to a dentist. The NHS has recognised, comparatively recently in its history, the importance of service users' views on how services are provided.[4,5] It is therefore important to understand how parents view screening, as their actions determine what happens to screened positive children and, therefore, the overall effectiveness of the programme.

Recent work undertaken in Manchester reported the views on school dental screening of parents living in deprived areas.[6] This qualitative study found that parents were largely supportive of the activity but there was confusion about the service, and criticisms about a lack of communication about the objectives and processes of screening. This was one study of the views of parents whose children were seen by one service, but there are other stakeholders in the process. These include teachers, who have to accommodate the screening within their schools, and school nurses who may help with the screening process and deal with enquiries. Therefore a gap remains in our understanding about how this long-standing statutory requirement is viewed by key participants in the process.

The aim of this study was to record the views of these various

stakeholders with regard to school dental screening, focusing on identifying problems with the process and potential solutions to these problems.

## METHOD

The study took place in Chester and Ellesmere Port in the North West of England. NHS dental epidemiological data was used to rank all 72 schools in the district according to the mean dt of each school. To ensure that a full range of views from subjects living and working in affluent (low disease) and more disadvantaged (high disease) areas, subjects were recruited from the four schools with the lowest mean dt and the four schools with the highest mean dt on the list. Data were collected from three groups of stakeholders:

- Parents of children aged six to eight years who were attending the eight selected schools were invited to take part in focus groups held in each school. Parents were initially invited by letter to participate and eight [the 'optimal' size of a focus group[7]] parents were selected and invited to participate in a discussion lasting approximately one hour. In schools in the more disadvantaged areas, recruitment had to be supplemented by a face-to-face approach when parents were dropping off or picking up their children from school
- A total of eight semi-structured interviews with the individual teachers responsible for overseeing dental screening in each of the selected schools were carried out
- The eight school nurses working in the selected schools were invited to participate in a single focus group.

This qualitative methodology was designed to capture the full range of opinions and attitudes of these three stakeholder groups on school screening.[8] A single researcher trained in qualitative research methods conducted all of the eight focus groups with parents, the single focus group with school nurses and the eight interviews with teachers. Both the interviews and the focus groups began with the facilitator describing how the process of dental screening is conducted using a standardised introductory statement. Participants were then asked to comment on the process; as the focus groups and interviews progressed, participants determined the content of the discussions.

The discussions and interviews were tape recorded and transcribed verbatim. Two trained analysts independently reviewed all of the transcribed texts and compared their findings from the content of the texts. The transcripts were analysed thematically without pre-conceptions about content using a constant comparative method to identify key themes.[9] This involves coding data from the transcriptions and constantly comparing with new data derived from subsequently completed interviews and focus groups. This was continued until no new themes were emerging from the transcripts. During the preliminary analyses in this process, a number of key issues were identified which were explored in greater depth in later interviews and focus groups. Analysis continued until saturation of concepts was reached, that being when no new concepts could be identified. Several key themes and concepts emerged and these are used as headings in the results section under which relevant quotes are noted to illustrate stakeholders' views within the identified themes.

## RESULTS

Five principal themes emerged from the analysis; these are reported in turn.

### 1) Support for the concept of negative consent

Part of the rationale for conducting this research was to see how various stakeholders perceived the process of 'negative consent', which has been routinely used in dental screening for many years. From the teachers' point of view it was seen as the only way of practically conducting a screening programme. As one teacher typically commented: *'Absolutely, totally acceptable. Certainly, I'm a great supporter of the opting out principle as opposed to the opting in'* (T6).

Parents were also very comfortable with this approach: *'Some children might get these letters and not actually give them to their mum or dad. Then they don't get screening. ...so they're losing aren't they?'* (P5)

*'The good thing is if they don't give it to parents they will be done anyway'* (P7).

The school nurses were also in agreement, seeing things from a slightly different perspective, *'...we're not allowed to use negative consent for our things but I can appreciate that if you didn't use negative consent with this, you wouldn't get anybody'* (N2).

### 2) The acceptability of the dental examination as a screening test

The screening examination was perceived positively by all of the teachers due largely to its brevity. As one teacher typically commented: *'Obviously you're looking for minimal disruption of the school so from that point of view, it's minimal disruption and I think it's good for children also because I think there is also this fear of the dentist, you know, what are they going to do? So, the quicker the process, the better all round'* (T7).

Participants thought the screening examination was helpful for children: *'I think it's breaking down barriers really, isn't it, it's more of breaking down barriers than actually identifying, except in extreme cases. You know, the kids don't feel so frightened, they've seen one dentist so they're not so frightened to go again'* (N4).

One parent said *'Its not too traumatic, you know all the others are doing it. They see them come away smiling so its quite a good experience for them'* (P2), and others made similar comments: *'People actually fear going to the dentist but I think doing it through a school situation like that... it's probably regarded by them as a fun thing. ...It might take a bit of the fear factor away'* (P8).

These responses portray a consistent belief amongst each group of stakeholders in the concept that a brief, atraumatic communal dental examination is a positive experience for young children, which can prevent or allay dental fear and anxiety.

### 3) Should screening be targeted?

This issue was brought up on a number of occasions during interviews with teachers and parents. For instance, one teacher wondered if it would be more effective to target particular children rather than examine the whole group. Is a great deal of *'time being wasted on children who do already have regular checkups on their teeth?'* (T6), she asked.

In a number of focus groups with parents, this concept was supported, however, it was seen as problematic by some parents who thought this could be seen as *'quite intrusive'*, as if parents were being *'watched'* and *'monitored'* (P3) and raised the possibility of stigmatising certain children: *'I would have big reservations about (targeted screening) because it makes them stand out... and it sounds like it doesn't save a lot of time if it's only a couple of minutes for each child'* (P3).

Therefore whilst professionals may be conscious about the need to spend public money efficiently some parents are more concerned about possible negative effects on individuals.

#### 4) Adequacy of the follow up procedure

In the area where the study took place, parents whose children had screened positive were informed by sending a letter sent home with the child. Parents were asked to send a reply slip to the CDS if they had taken their child to a dentist. There was no further follow up. Teachers and parents alike generally agreed that current practice was unacceptable. As one teacher commented: *'From a teacher's point of view you wouldn't do an assessment and not follow it up, and that's what (the dental screening) is doing isn't it?'* (S5).

This view was reiterated by parents who typically commented that: *'you go through all this and find a few children that need it and then not to do anything about it, it seems such a waste of money and effort'* (P1); another commented that it all *'seems a bit pointless'* (P4).

Both parents and teachers were sceptical about sending letters home about screening outcomes *via* children, for example *'How many parents do you know look in the child's bags?'* (P1), and *'...a child was looking for their homework and I went through his bag and he'd got about six months' letters in there'* (T2).

Participants perceived a key difficulty in the process was that many parents were not taking their screened positive children to the dentist. Views voiced by participants such as *'...you can take a horse to water but you can't make it drink, can you?...you've done your best, you've even provided the free postage back, so it's up to the parents whether they want... the essential thing is if they're the kind of parent, if not, it doesn't matter what you do...'* (P5).

In one focus group, one parent defended *'irresponsible'* parents, who did not *'properly care'* for their child's teeth, by arguing that: *'there's a couple of mums that have quite a handful of children on the estate, getting them all ready to go and just spend, what half an hour at the dentist. I mean, it's not easy'* (P3). This view implied that many parents see dental health and the need to attend a dentist once prompted by screening as a low priority in the day-to-day lives of families with young children.

Although there was almost universal criticism of the lack of follow up, when possible ideas to solve this problem were discussed there were very mixed views about the practicalities and acceptability of these proposals. A number of teachers suggested that schools could help to support the screening with the school administrative staff playing a more prominent role in the dental screening process. This view was shared by parents: *'I think parents tend to be more pro-active with the school, they're closer to the school than they are to community dental health...'* (P5).

Other suggestions ranged from simple means of reminding parents, for example *'is there another way of communicating; like phoning the parent?'* (P3), to other interventions escalating in their intrusiveness, for example *'It may sound funny, but is there any link to social services from this, do you pass the information across?'* (P3).

A third area of concern about the process related to perceived problems of dental access. For instance, during one of the focus groups (P6), the facilitator's description of how a list of NHS dentists in the area was sent with the follow up letter, was met with general mocking laughter by the group: *'Have we even got any (NHS dentists) in the area?'*,(P6) one parent asked. In another group, a parent expressed similar sentiments, *'...and that's where you get the problems. The dental places in the area are very limited and there's a waiting list for most of them in this area anyway for NHS patients'* (P4).

There was a strongly held perception that a lack of access to dental services was a significant barrier to the success of screening. In reality, in the area where the study was conducted, at the time of the study there were no difficulties in children gaining access to NHS dental services. Therefore, there was a gap between parents' perceptions and reality.

Suggestions were made by parents to make access to a dentist more readily available and convenient for parents. One suggestion was for a fixed date and time of an appointment at the community dental clinic: *'If you make an appointment for them, then they'll think there's something that needs doing... I'm sure if someone made an appointment for me, I'm sure I'd go'* (P4). But another parent pointed out, *'you then have the other problem that you're clogging up the system with appointments that aren't going to be kept... at the moment there are waiting lists for dental treatment (that are) never ending, and you might clog it up even more'* (P1).

Other parents discussed providing dental services within the school setting: *'you give them the injections in school so why not give them dental treatments in school as well?'* (P4). Another parent similarly pointed out that the *'clinic's only up the road...isn't it possible to get authorisation off the parents and do the children within school time?'* (P3).

*'Or what about'*, as one parent suggested, *'the option of some kind of 'mobile clinic?'* (P4).

This discussion concluded with one parent emphasising that they thought the best encouragement for parental participation was to *'...make the service as accessible as possible to families, as close to the school where they're going to come every single day to drop their child off, making that service available there is the biggest encouragement you can get'* (P4).

#### 5) Who is responsible for dental health?

The discussions regarding potential improvements in the follow up process led to the contentious question of who is responsible for dental health – government representatives (in the form of teachers or the CDS), or parents? Teachers did not think it was their responsibility, as one teacher commented, *'we are being inundated with work at the moment'* (T6). When teachers were asked if they thought other health professionals such as school nurses could be involved in the feedback process, a number of them also expressed the belief that school nurses were already

*'overburdened'* and were wary of *'overload'*.

The school nurses themselves expressed a reluctance to become too involved in dental follow up, *'what with all the work we've got at the moment'* (N3). Having said that, they did generally think it was important for school nurses to play a role in promoting dental health, *'by flagging it up at every available opportunity'* (N4).

Parents did not generally think teachers should be involved in follow up of the dental screening. *'What with the discipline and everything else'*, one parent typically responded, *'I don't think they need to take on a health issue as well'* (P1). In terms of involvement of the school nurse, most parents actually seemed to be very unclear about the role of the school nurse. *'We don't have a school nurse here do we?'* (P4) and *'she doesn't come to the school now, does she?'* (P5) were typical comments.

Aside from the practical issues of workload, most of the teachers also felt that it should not be their responsibility to, as one teacher put it, *'badger parents to take their child to the dentist'* (S4). In the school nurse focus group, the same view was reiterated: *'It's up to the parent isn't it? ...If the parents are going to do it, they're going to do it. If they're not, no matter how much we chase them up, they're not going to do it.'* (N5).

Parents were very clear that the role of Government agencies in ensuring children receive appropriate care is limited and parental responsibility has to be held to account: *'I think you throw the ball into the parents' court don't you by sending the letter home, giving them a list of NHS dentists and saying... look we're telling you your child's teeth need treatment, and really, it's up to them...'* (P1).

*'At the end of the day, it's down to the responsibility of the parent or guardian'* (P4).

Debates on the issue of parental rights and civil liberties developed in several groups. As one parent argued: *'I'm not sure you can do anything else to be honest, because it's similar to MMR, you can't force parents to have the injection or, you know, at the end of the day it is sort of a civil liberty that the parents are bringing their children up how they like and I think if you had any sort of coercion... I'm not sure you'd get the co-operation. You could end up in a situation where you're literally prising a child's mouth open or something, you know, ...you can't bodily remove a child to the dentist and force them...'* (P1). And as another parent succinctly summarised: *'You're not the dental police are you? You can't police people and force them to do things...?'* (P5).

## DISCUSSION

This research aimed to identify the views of various stakeholders towards the current school dental screening process in the UK. There seemed to be a surprising amount of agreement in the views of the three groups, although they were interviewed separately. In common with the findings of Preston *et al.*,[6] all groups seemed to think school dental screening provided a valuable service. This activity may feel inherently worthy to lay people unacquainted with the current imperative to provide screening services which are evidence-based and result in improved health.[10] This sense that lay views are not in tune with professional thinking is perhaps best illustrated by the views expressed about consent. Although the teachers and parents (and school nurses) interviewed perceived the process of negative consent for the screening examination as appropriate, guidance has recently changed and negative consent is no longer acceptable.[11] Surprisingly, parents had a very relaxed attitude to permitting health professionals to undertake not only examinations but treatment on their children without heed to any of the modern constraints relating to the principle of informed consent.

There were legitimate concerns that the screening programme was of little value if access to dental services was difficult. In the location where the study was conducted, there were no problems for children to obtain access to free NHS dental services. This difference between perceptions and reality is interesting and is probably a result of negative media stories about problems with dental access in many areas of England. This finding indicates the importance of effective communication for primary care trusts so that their residents have appropriate and easily obtainable information on how to access to dental services. If school dental screening is to improve population health and benefit those referred from screening, this information must be accurate and readily available to parents of children who are screened positive.

The follow up procedures for screened positive children described to subjects reflects current practice in many parts of the UK,[12] and were clearly seen as inadequate. A recently conducted large randomised controlled trial of school dental screening has demonstrated that the programme is not effective at reducing dental disease or improving attendance at the population level.[13] A supplementary study that followed up screened positive children reported that less than half of them attended the dentist and of those that did attend, approximately half failed to complete their dental treatment.[14] The qualitative study reported here found that whilst parents recognised they had prime responsibility to ensure that their children attended a dentist, many provided reasons why this was difficult to realise. The data strongly suggests that untreated dental disease in young children is not as important an issue for some parents as it is for the dental profession. This concept is supported by the findings of a recent study in the same area, which demonstrated that a large proportion of parents would elect to leave an asymptomatic carious primary tooth unrestored.[15] We also know that children from deprived backgrounds are more likely to have high levels of disease but are less likely to attend the dentist.[14,16] This lack of motivation of parents combined with screening's inadequate follow up procedures probably accounts for the failure to demonstrate beneficial effects in the randomised control trial.[13]

Unless effective means are found to not only ensure children attend, but also complete their course of treatment, the school dental screening process will remain ineffective. Many of the proposed suggestions for improving the process were impractical for technical, logistical and legal reasons. The ideas for booked appointments voiced by some parents have a good evidence base for improving attendance in other screening programmes, but these were for diseases of a more serious nature[17,18] and have not been tested in the dental field. A more influential role for the school in following up parents of screened positive children, perhaps involving school nurses supported by oral health promotion staff, may help, as

there is some evidence to demonstrate that attendance can be increased by more extensive follow up.[19] However, and most importantly for screening, we have no evidence to suggest that interventions to increase the attendance rate also increase the rate of completed courses of treatment, or whether the costs involved in providing more intensive follow up are justified by increased benefits.

School dental screening as it is currently delivered has been shown to be ineffective.[12,13] This study provides some indications as to why this should be the case. Positive consent is now advised for screening examinations[11] and this will further reduce its effectiveness due to anticipated low levels of response, particularly in more disadvantaged areas. With all of these new problems added to the identified historical problems of screening,[20,21] now is the time to consider if the statutory access to schools and the resources supporting this national programme could be more efficiently used for some other purpose.

*This study was funded by the North West Region Department of Health Research and Development programme. The views and opinions expressed in this paper do not necessarily reflect those of the funding authority.*

1. World Health Organization. *Oral health promotion: an essential element of a health-promoting school.* WHO information series on school health, document 11. Geneva: WHO, 2003.
2. Department of Education. *The education act.* London: HMSO, 1918.
3. Department of Health. *The functions of primary care trusts (dental public health) (England) regulations.* http://www.opsi.gov.uk/si/si2006/20060185.htm. 2006.
4. Department of Health. *Modernising NHS dentistry – implementing the NHS plan.* London: Department of Health, 2000.
5. Department of Health. *Involving patients and the public in healthcare: discussion document.* London: Department of Health, 2001.
6. Preston S T, Davies G M, Craven R. An investigation of parents' attitudes to dental health and school dental screening. *Community Dent Health* 2001; **18:** 105-109.
7. Bloor M, Frankland J, Thomas M, Robson K. *Focus groups in social research.* London: Sage Publications, 2001.
8. Green J, Thorogood N. *Qualitative methods for health research.* London: Sage Publications, 2005.
9. Donovan J, Sanders C. Key issues in the analysis of qualitative data. *In* Bowling A, Shah E (eds) *Handbook of health research methods: investigation, measurement and analysis.* Health services research. Maidenhead: Open University Press, 2005.
10. Department of Health. *Second report of the UK national screening committee.* London: Department of Health, 2000.
11. Department of Health. *Consent for school dental inspections and dental epidemiological surveys.* London: Department of Health, 2006.
12. Threlfall A, Milsom K M, Catleugh M, Kearney-Mitchell P, Blinkhorn A S, Tickle M. School dental screening in the community dental services of England and Wales in 2003. *Community Dent Health* (in press).
13. Milsom K M, Blinkhorn A S, Worthington H V *et al.* The effectiveness of school dental screening: a cluster randomized control trial. *J Dent Res* 2006; **85:** 924-928.
14. Milsom K M, Threlfall A G, Blinkhorn A S, Kearney-Mitchell P I, Buchanan K M, Tickle M. The effectiveness of school dental screening: dental attendance and treatment of those screened positive. *Br Dent J* 2006; **200:** 687-690.
15. Tickle M, Milsom K, Humphris G M, Blinkhorn A S. Parental attitudes to the care of the carious primary dentition. *Br Dent J* 2003; **195:** 451-455.
16. Tickle M, Williams M J, Jenner A M, Blinkhorn A S. The effects of dental attendance and socio-economic status on dental caries experience and treatment patterns in 5-year-old children. *Br Dent J* 1999; **186:** 135-137.
17. Garton M J, Torgerson D J, Donaldson C, Russell I T, Reid D M. Recruitment methods for screening programmes: trial of a new method within a regional osteoporosis study. *Br Med J* 1992; **305:** 82-84.
18. Stead M J, Wallis M G, Wheaton M E. Improving uptake in non-attenders of breast screening: selective use of second appointment. *J Med Screen* 1998; **5:** 69-72.
19. Zarod B K, Lennon M A. The effect of school dental screening on dental attendance. The results of a randomised controlled trial. *Community Dent Health* 1992; **9:** 361-368.
20. Milsom K M. School dental screening – what value? *Br Dent J* 1995; **178:** 322.
21. Tickle M, Milsom K M. Oral screening: time for a change of terminology and methodology. *J Med Screen* 1999; **6:** 163-164.