



May 2007

## **British Dental Association response to Home Office consultation paper, *Planning Better Outcomes and Support for Unaccompanied Asylum Seeking Children***

The British Dental Association (BDA) is the trade union and professional association for dentists practising in the UK, representing 23,000 members working in all aspects of dentistry, including general practice, salaried services, the armed forces, hospitals, academia and research.

This paper forms the BDA's response to the Home Office proposal to use dental x-ray examinations to improve age assessment of unaccompanied asylum seeking children.

### **BDA position statement**

The BDA is vigorously opposed to the use of dental x-rays to determine whether asylum seekers have reached 18. This is an inaccurate method for assessing this age. We also believe that it is inappropriate and unethical to take radiographs of people when there is no health benefit for them.

### **Accuracy of dental x-ray examinations as a means of assessing age**

*Planning Better Outcomes and Support for Unaccompanied Asylum Seeking Children* lists only one dental maturity study (Moorrees, Fanning and Hunt 1963), with no evidence of any published work reporting accuracy.

The level of accuracy of this technique is related to age; estimated age in younger children is more accurate than in young adults. A reasonable error is about ten percent of age (Smith, 1991<sup>1</sup>), so at age 10 the error is about 0.1 year, at age 18 it's about 1.8 year. At the age of 16, all the permanent teeth are usually fully formed with the exception of the third molar. The developmental timing of this tooth varies considerably and the root is fully formed between ages 16 (early maturing individuals) and 23 (late maturing individuals). There is an added problem, a small proportion of individuals do not develop third molars and age cannot be estimated using developing teeth for these individuals after the second molar root is fully formed.

Dr Helen Liversidge has conducted a study into the accuracy of thirteen commonly used dental age estimation methods using the test sample used by Maber *et al.*, 2006. She has found that on average, it is possible to correctly estimate the age of children aged 3 to 13. Willems *et al.*, 2001 is the method of choice for assessing age using dental x-rays. However, the BDA remains concerned about the accuracy of this technique for assessing the age of young adults.

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<sup>1</sup> Smith, B H, Standards of human tooth formation and dental age assessment. In *Advances in Dental Anthropology*, eds. M. Kelley & C. S. Larsen, 1991, pp. 143-168. New York, Alan R. Liss

Preliminary results from research conducted by Dr Helen Liversidge has found that white and Bangladeshi children in London, South African black and coloured children, Australian Aborigines, Malaysian and Japanese children suggest that the timing of teeth including the third molar differs only slightly between these world groups. No major differences between children of European origin in several countries have been demonstrated (Liversidge et al. 2006<sup>2</sup>), as well as between white Caucasian and Bangladeshi children living in London, although these comparisons are between *groups of children*.

Estimating age for an individual will have a large margin of error because children mature at different rates. Some children mature early, some later and this range is small in early childhood but can be considerable for the last developing tooth, the third molar. In an early maturing individual the mandibular third molar root might be complete at 16 years of age, while a late maturing individual will reach this stage six or seven years later. Using root formation of this tooth to estimate age will therefore have a large margin of error.

Given our concern about the level of accuracy of dental x-rays for assessing age, the BDA believes that if the Home Office chooses to carry out this proposal, this technique should not be the sole method that is used to assess the age of unaccompanied asylum seeking children.

#### **Justification for exposure to ionizing radiation**

The BDA is seriously concerned about the legality of the proposal to undertake dental x-ray examinations of unaccompanied asylum seeking children for the purpose of assessing their age. The Ionising Radiation (Medical Exposure) Regulations 2000 state the circumstances in which individual medical exposures to ionising radiation can be justified. Regulation 6 specifies that a person should not carry out a medical exposure unless it has been justified by a practitioner. In justifying the medical exposure “the practitioner must pay special attention to exposures that have no direct health benefit for the individuals undergoing the exposure.”

#### **Response to consultation paper question 4, page 13**

4. What might be a valid reason for refusal to undergo a dental x-ray or other medical examination to improve age assessment?

The BDA believes that like any UK citizen, an individual seeking asylum has the right to refuse a medical procedure. This is particularly the case, when the primary purpose of the procedure is of no direct benefit to their health.

The consultation paper’s proposal breaches the fundamental principles of consent and confidentiality, which are well defined in UK law. Medical procedures are for medical purposes only, confidential between the patient and the clinician. Information relating to them cannot be used for any other purpose without the consent of the individual.

Whether an individual is over or under the age of 16, they have the right to withhold consent. Under the age of 16, the law recognises that a child can give consent if it is clear that he is able to understand the nature of the procedure and its implications.

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<sup>2</sup> Liversidge, H M, Chaillet, N, Mörnstad, H, Nyström, M, Rowlings, K, Taylor, J, Willems, G, Timing of Demirjian tooth formation stages, *Annals of Human Biology*, 2006, 33, 454-470

Over the age of 16, the law requires that, if competent, an individual is permitted to give or withhold consent. It would be unethical for a clinician to act contrary to these principles.

*Planning Better Outcomes and Support for Unaccompanied Asylum Seeking Children* states that the Home Office is “firmly of the view that an unreasonable refusal to undergo an x-ray examination should strongly inform the final decision on age”. The BDA is extremely concerned that refusal to undergo exposure to ionising radiation or to have x-rays used for the purposes other than medical procedure may be used to inform the final decision on age.

### **Use of this method by members of the European Union**

*Planning Better Outcomes and Support for Unaccompanied Asylum Seeking Children* states that “x-ray analysis... can be a more reliable means of determining age that was once thought. That is certainly the belief of some of our EU partners, who regularly use these techniques for immigration.” To assess the prevalence of the use of these techniques in the European Union, the BDA conducted a survey of members of the Council of European Dentists in January 2007. Our survey found that:

- Six, out of a total of twenty-one members who responded, use dental x-rays to assess the age of asylum seekers.
- Of these six, only two members evaluate the results of radiographs against comparative data about dental development of children in the asylum seeker’s country of origin.
- Only four out of a total of twenty-one member associations felt that dental x-rays were an accurate means of assessing age.

See the appendix for further information about the survey and results.

### **Conclusion**

To summarise, the BDA is opposed to the Home Office’s proposed use of dental x-rays for assessing the age of asylum seekers for the following reasons:

- It is an inaccurate method for assessing whether individuals have reached 18.
- We believe it is inappropriate and unethical to take a radiograph of an individual when there is no direct health benefit to them.
- We are concerned about the legality of the proposal with respect to the justification for exposing an individual to ionising radiation when it is of no direct health benefit.
- Like any UK citizen, an individual seeking asylum has the right to refuse a medical procedure, particularly when the primary purpose of the procedure is of no direct benefit to their health. We are extremely concerned that refusal to undergo exposure to ionising radiation may be used to inform the final decision on age.

If the Home Office were to go ahead with this proposal, the BDA would like assurance that dental x-rays will not be used as the sole method of assessing the

age of the individual. We would also like assurance that the right of the individual to refuse to undergo this procedure and to refuse to have x-rays used for any purpose other than medical procedure will be upheld. An individual's decision to withhold consent should not inform the final decision on age.

**Appendix**

The Council of European Dentists (CED) is a European not-for-profit association which represents over 300,000 dentists across Europe. It is composed of national dental associations from 29 European countries. Its key objectives are to promote high standards of oral health and to promote the interests of the dental profession in the EU.

The BDA received responses from 21 out of 29 member associations. The questions asked and a break down of the responses, are shown below:

Q1. In your country, are dental x-rays used to determine the age of asylum seekers?

Q2. If your answer to Q1 is yes, do you know whether the results of radiographs are evaluated against comparative data about dental development of children in the asylum seeker's country of origin?

Q3. Do you think dental x-rays are an accurate method for determining age?

Key	
✓	yes
✗	no
?	don't know
n/a	not applicable
n/r	no response

Country	Q1	Q2	Q3	Comments regarding accuracy
Austria	✗	n/a	?	-
Czech Republic	✗	n/a	✓	Dental x-rays can be useful to determine the age of children, but can be problematic regarding adults.
Denmark	✓	✓	✓	Dental x-rays can be useful when used in conjunction with other methods.
Estonia	✗	n/a	✗	-
Finland	✓	✗	✗	There is no better method available.
France	✓	✗	✗	-
Greece	✗	n/a	✓	It is quite accurate but always within a range of years.
Hungary	✗	n/a	n/r	-
Iceland	✓	✗	✓	-
Italy	✓	✗	✗	-
Lithuania	✗	n/a	✗	-
Malta	✗	n/a	✗	A clinical examination should be enough indication of a child's age. The wide range of variation of eruption dates renders x-rays just as reliable or unreliable as clinical examination.
Netherlands	✗	n/a	✗	-
Poland	✗	n/a	✗	-
Portugal	✓	✓	✓	The methods for age determination by dental x-rays allow for a good correlation between the estimated age and the actual age, especially during the development of dentition, that is, up to the age of 22. In adults, this correlation cannot be determined so accurately.
Republic of Ireland	✗	n/a	✓	The use of dental x-rays could, in theory, assist in determining the age of young persons. However, the practice of exposing any individual to radiation doses for such purposes cannot, in the opinion of

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				the Irish Dental Association, be supported.
Romania	✘	n/a	✘	-
Slovakia	✘	n/a	✘	It is an auxiliary method. For children and for adolescents it can assess age within +- 2 years and for adults it is even less accurate.
Slovenia	✘	n/a	✘	-
Sweden	✘	n/a	✘	-
United Kingdom	✘	n/a	✘	-