

Equal oral health for young children—A new approach?

The UN Convention on the Rights of the Child which has been ratified in all countries belonging to United Nation (UN) except for USA (and also incorporated in national law in some countries) states that all children shall have the right to best possible health and access to health care.¹ This includes good oral health and access to dental care.

In Scandinavia, all children have right to free dental care and it is the responsibility of all regions to provide dental care for children and adolescents. This includes both preventive treatment and rehabilitation such as for example filling therapy, extractions and orthodontic treatment if needed.

Oral health in children and adolescents has improved over years. In Scandinavian countries, there are many children with good oral health. For example, 95% of Swedish 3-year-olds and 73% of 6-year-olds are caries-free (data from Swedish National Board of Health and Welfare).² Even though the proportion of caries-free children and adolescents decreases with increasing age, large proportions of the child population have no problems with their teeth. However, there are children which extensive caries lesions and where dental care does not reach with preventive methods. One large proportion of children who are referred to a specialist clinic in paediatric dentistry for dental treatment in Sweden are very young children with extensive treatment needs—that means extensive caries lesions.³ Often these children receive dental treatment under general anaesthesia and sometimes up to 8–10 teeth have to be extracted due to extensive caries lesions. In addition to suffering for the child, it also entails great costs for the society.

There is a clear connection between socio-economic factors and social vulnerability and oral health. Having low-educated parents, single parents, unemployment in the family or parents coming from countries outside of Europe increases the risk for the child to have caries.^{4,5} These connections are stronger the younger the child is. There is also a strong connection between caries at young age and continued caries development⁶—once you have caries, it seems difficult to turn the ship around. Early childhood caries (ECC)—caries in early stage of life—can result in both pain and infections and problems to eat and chew.

The Swedish National Board of Health and Welfare⁷ reported in 2013 a connection between parent's and children's oral health and their attendance to dental care. The poorer the dental health of the parents, the greater the risk that the children would have caries.

Caries in parents also resulted in lower attendance to dental care for the children.

Unfortunately, there is little evidence of which preventive methods that are effective. Water fluoridation has been shown to have good preventive effect on dental caries but does not occur in all countries, such as the Scandinavian countries. Daily toothbrushing (twice a day) with fluoride toothpaste has been shown to have a good caries-preventing effect on young permanent teeth and this certainly applies to primary teeth. Parents have to brush the child's teeth up to school age and after that supervise the brushing until the child is able to take full responsibility—usually around age 10. Despite the dental care's attempt to convey this seemingly simple way to prevent caries, not all families are reached or absorb the message. The reason for this can be lack of knowledge and resources, traditions, norms and so on.

It is important to reach families in vulnerable areas early, well in advance of the children developing caries. An early example of this was the 'Rosengård project' in the city of Malmö in southern Sweden. The children were called at age 2 and the parents received individual counselling on tooth brushing habits and dietary habits with focus on sugar-containing products. The children also received a toothbrush and fluoride tablets. In comparison with a reference group, these children had a lower incidence of caries at 5 years of age.⁸ Parents' daily assistance with toothbrushing and administering fluoride tablets was significantly better in the intervention group than in the reference group. This project turned out so well that similar activities started up elsewhere.

Another way that is highlighted more and more is a close interdisciplinary collaboration where several actors, for example the Child Health Services and Social Services work together, in order to give the families increased support to care for the children. Seeing the mouth as part of the body and that children's dental health can affect both general health and future caries development is an important message to convey.

The study in this issue described an attempt to rectify the problem.⁹ The idea that several actors work together has been around for a long time and is tested in this study. First-time parents in a disadvantaged area received six home visits by different actors, at the fourth visit (8 months of age), information on oral health was given and the children received a toothbrush fluoride toothpaste. The children were examined at ages 18 and 36 months. In comparison with a

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2020 The Authors. *Acta Paediatrica* published by John Wiley & Sons Ltd on behalf of Foundation Acta Paediatrica

reference group, they had a lower incidence of caries at 18 months. At 36 months, the differences were not so pronounced.

This study showed that these home visits were effective in the short run, but the study also indicates that continuous efforts are needed. Working to ensure that young children in vulnerable areas have as good dental health as children living in areas with better conditions is a constant challenge and must be taken seriously by both the dental care itself but also by decision-makers. The right of all children to good and equal health must not only be a vision but also an important goal to strive for.

CONFLICT OF INTEREST

The author has no conflict of interest to declare.

Karin Ridell 

Faculty of Odontology, Malmö University, Malmö, Sweden
Email: karin.ridell@mau.se

ORCID

Karin Ridell  <https://orcid.org/0000-0002-4501-6976>

REFERENCES

1. UN Commission on Human Rights, Convention on the Rights of the Child, 7 March 1990, E/CN.4/RES/1990/74, available at: <https://www.refworld.org/docid/3b00f03d30.html> [accessed 31 July 2020]
2. Socialstyrelsen. Karies bland barn och ungdomar. Epidemiologiska uppgifter för år 2018. <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/ovrigt/2020-2-6629.pdf> (accessed 31 July 2020). In Swedish.
3. Klingberg G, Andersson-Wenckert I, Grindefjord M, et al. Specialist paediatric dentistry in Sweden 2008 - a 25-year perspective. *Int J Paediatr Dent*. 2010;20:313-321.
4. Christensen LB, Twetman S, Sundby A. Oral health in children and adolescents with different socio-cultural and socio-economic backgrounds. *Acta Odontol Scand*. 2010;68:34-42.
5. Schwendicke F, Dörfer CE, Schlattmann P, Foster Page L, Thomson WM, Paris S. Socioeconomic inequality and caries: a systematic review and meta-analysis. *J Dent Res*. 2015;94:10-18.
6. Alm A, Wendt LK, Koch G, Birkhed D. Prevalence of approximal caries in posterior teeth in 15-year-old Swedish teenagers in relation to their caries experience at 3 years of age. *Caries Res*. 2007;41:392-398.
7. Socialstyrelsen. Sociala skillnader i tandhälsa bland barn och unga. Underlagsrapport till barns och ungas hälsa, vård och omsorg 2013. <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/ovrigt/2013-5-34.pdf> (accessed 1 Aug 2020)
8. Wennhall I, Matsson L, Schröder U, Twetman S. Outcome of an oral health programme for preschool children in a low socioeconomic multicultural area. *Int J Paediatr Dent*. 2008;18:84-90.
9. Brännemo I, Dahllöf G, Soares FC, Tsilingaridis G. Impact of an extended postnatal home visiting programme on oral health among children in a disadvantaged area of Stockholm, Sweden. *Acta Paediatr*. 2020. <https://doi.org/10.1111/apa.15457>