



Dental care for children born with high biological risk or with established injuries

Brief description

To facilitate access to preventive and therapeutic paediatric dental care for children affected by physical or mental disabilities, based on an individualised evaluation of each case and its specific pathology. All those engaged in research within the field of paediatric dentistry, particularly in the prevention of oral diseases tailored to the child's growth and developmental stages.

How does it work?

Following prior contact with the target population through special education centres, hospitals, or study groups, an assessment of each child's condition is carried out. Through a preliminary questionnaire sent to the parents, data are collected regarding past or current illnesses, previous dental experiences, and other relevant factors, with the aim of creating a detailed and individualized record for each child.

At the same time, information is exchanged between pediatric dentists and educators, parents, and pediatricians, with the aim of raising awareness about the most common pathologies in these population groups. After analyzing each child's oral health status, a corresponding individualized report is prepared.

Health strategies are then established with the aim of maintaining oral health in these children, taking into account that in cases where pathology is extensive, the possibilities for oral care may be severely limited. For this reason, prevention becomes particularly significant from the moment pregnancy is identified as high risk, with the implementation of monitoring and care programmes in collaboration with the paediatrician, parents, and special education teacher.

What problem does it solve?

This approach facilitates access to a personalized oral health care plan for children born under conditions of high biological risk or with established injuries, with the objective of reducing the prevalence of the most frequent oral diseases observed in this group.

What future products will it develop?

Improvements in the care services for paediatric patients born under high-risk conditions or with established injuries are included in the general programmes jointly carried out by the Faculty of Dentistry at the Complutense University of Madrid, specifically in the area of paediatric dentistry, in collaboration with special education centres within the Autonomous Community of Madrid. These include the La Paz University Hospital, Madrid (IdiPAZ), the CEPRI Foundation, the ALEPH Foundation, the Down Syndrome Foundation of Madrid, and the Leo Kanner Foundation.

There is also collaboration with study and follow-up groups for paediatric patients born under high biological risk conditions. These groups are composed of intensive care paediatricians, psychologists, ophthalmologists, ENT specialists, neurologists, maxillofacial surgeons, and social workers. Joint oral health programmes are carried out within research projects funded by the Ministry of Education and Culture, the Community of Madrid, and the Health Research Fund.



Figure 1. Paediatric patient with cleft lip and palate, requiring specific oral care throughout the various stages of growth and development.



Figure 2. Dental anomalies in a patient with mixed dentition. The aetiology relates to sequelae from oncological treatment with radiotherapy during odontogenesis.

Included within these services, collaborative areas are established in the form of oral health monitoring and follow-up across three key settings:

- **Home-based oral health programmes**, aimed at enabling the child to become responsible for their own oral care. Initially supervised by parents, these programmes are designed to foster the child's autonomy in the future.
- **Oral health programmes within special care centres**, where educators supervise and implement the protocols established for each child as part of their health education.
- **Dental care programmes for children with disabilities**, which take into account all relevant aspects depending on the patient's specific condition. These include the development and implementation of care, prevention, and follow-up programmes, as well as the design of new systems to facilitate and improve the management of oral diseases in these population groups.

Competitive advantages compared to other research

In Spain, in general, Child Dental Care Plans are limited to the age range of 6 to 16 years. Specifically in the Autonomous Community of Madrid (CAM), there is little to no public dental care provision for younger children (under the age of 6). In particular, within paediatric care, the prevention and treatment of primary teeth during the first 71 months of life has not yet been established. This results in the presence of untreated oral conditions from a very early age, notably Early Childhood Caries (ECC)^{1,2 3}. Diseases such as this one significantly affect the quality of life of the affected child. These conditions have a particularly severe impact on patients born under high-risk conditions or with established injuries.

Oral health care for children with disabilities lacks specifically designed prevention, treatment, and follow-up plans. Furthermore, the number of professionals specialized in managing these patients and their conditions is extremely limited in our country. *(Leiva et al.)⁴ (Martínez et al.)⁵

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