Dental Home – Contemporary concept for early primary oral prophylaxis of children up to 3 years old (Literature Review)

Bogovska-Gigova, R.[1], R. Kabaktchieva[2]

Дентален дом – съвременна концепция за ранна първична орална профилактика на деца до 3 години (литературен обзор)

Боговска-Гигова, Р.[1], Р. Кабакчиева[2]

Summary

In recent years, in guidelines published by the American and European pediatric dental associations, the term Dental Home has emerged, following the example of the Medical Home. The Dental Home is defined as a continuous relationship between the dental practitioner and the patient that includes all aspects of oral health assistance and the providing of a continuous, thorough, accessible, coordinated and family-oriented assistance.

The operational policy of Dental Home was first developed and proposed in 2000 – 2001 by the AAPD, and in the following years several adaptations, updates and new formulations have been carried out by various organizations. The last revision was carried out in 2015 and the official guideline of the AAPD was published in 2018.

Nationwide programs have been created in Europe and America, the aim of which is to improve the access to practices operating in accordance with the Dental Home principle. The methods and target groups of these initiatives are different and vary, but their overall goal is to improve access to regular dental examinations. Another common aspect of the present Dental Home is the immediate relationship between the pediatric dental practitioner and the child patient. The structure of the Dental Home varies from program to program – it could be private or public, incorporate dental doctors and other medical and non-medical teams. This is why in spite of the fact the programs bear the common name Dental Home, no standard exists as to how to put the concept into practice.

Key words: *dental home, policy, concept*

Резюме

В последните години в гайдлайни на американската и европейската детски дентални асоциации се появи понятието Дентален дом, по примера на Медицински дом. Денталният дом се дефинира, като продължителна взаимовръзка между денталния лекар и пациента, включваща всички аспекти на оралната здравна помощ и осигуряване на непрекъсната, изчерпателна, достъпна, координирана и фамилно ориентирана помощ.

[1] Assist. Prof., MU-Sofia, FDM, Department of Pediatric Dentistry

[1] Асистент, МУ-София, ФДМ, Катедра ДДМ
[2] Професор, МУ-София, ФДМ, Катедра ДДМ

Политиката за работа на Дентален дом първоначално е била разработена и предложена през 2000-2001 година от AAPD, а през следващите години са правени няколко адаптации, актуализации и нови формулировки от различни организации. Последната ревизия е през 2015 г, а официалния гайдлайн на AAPD е издаден през 2018 г.

В Европа и Америка са създадени национални програми с цел подобряване на достъпа до практики работещи на принципа на Денталния дом. Методите и целевите групи на тези инициативи са различни и варират, но тяхната обща цел е да се подобри достъпа до редовни дентални прегледи. Други общи аспекти на настоящите Дентални домове са текуща връзка между детски дентален лекар и дете-пациент. Структурата на Денталния дом варира в различните програми - може да бъде частна или обществена, да включва дентални лекари и друг медицински и немедицински екип. Ето защо, въпреки че програмите използват общото понятие „Дентален дом“, няма стандарт за това как да бъде реализирана концепцията.

Ключови думи: *дентален дом, политики, концепция*

In recent years, in guidelines published by the American and European pediatric dental associations, the term Dental Home has emerged, following the example of the Medical Home [1]. The Dental Home is defined as a continuous relationship between the dental practitioner and the patient that includes all aspects oral health assistance and the providing of a continuous, thorough, accessible, coordinated and family oriented assistance [2].

The operational policy of Dental Home was first developed and proposed in 2000 – 2001 by the AAPD, and in the following years several adaptations, updates and new formulations have been carried out by various organizations (Table 1). The last revision was carried out in 2015 and the official guideline of the AAPD was published in 2018 [3]. Despite this there is still no definitively adopted definition on what constitutes a Dental Home, nor any methodology for measuring the results of applying the Dental Home principle. Most programs and studies aim

Table 1. *Historical development of the Dental Home concept*

Year	Main authors, organizations and concepts
2001	Primary policies of the Dental Home (developed by the American Academy of Pediatric Dentistry (AAPD) in 2001, last revised in 2018 – The Dental Home is defined as a continuous relationship between the dental practitioner and the patient that includes all aspects oral health assistance and the providing of a continuous, thorough, accessible, coordinated and family-oriented assistance [2].
2002	Description of the Dental Home by Nowak and Casamassimo [4].
2003	The American Academy of Pediatrics (AAP) publishes a political declaration, in which it calls for the creation of a Dental Home by the age of one [5].
2006	The American Dental Association (ADA) and AAP support the concept of the Dental Home. The AAP calls for cooperation between dental practitioners and pediatricians. ADA adopts the stance of the AAP that a Dental Home must be established by the time the child is one year old [6].
2006	The program I-Smile is created, initiated by the US Department of Health and Human Services, for the purpose of coordinating dental services for children in families with low incomes [7], [8].
2008	The Maternal and Child Health Bureau (MCHB, USA) convenes a meeting of experts from federal, national, state and local leaders, for them to study the concept of the Dental Home [9].
2012	The Association of State and Territorial Dental Directors (ASTDD) of the USA also recommends the creation of a Dental Home by the age of one [10].
2012	The model of a virtual dental practitioner is presented as an alternative method for the providing of dental care and services [11].
2012, 2013	In Bulgaria, Kabaktchieva and Gateva explore the idea of creating a Dental Home for the pediatric dental practice [12]; In 2013, in Sofia, an international forum for preventive dental medicine is carried out, where the role of the Dental Home in early caries prevention in early childhood is presented (report).
2018	Final revision of the definition and policy of the Dental Home, according to AAPD [2].

Table 2. *Features and advantages of the Dental Home, according to Nowak and Casamassimo [4]*

CHARACTERISTIC:	DESCRIPTION:	PRACTICAL ADVANTAGES:
Accessible	Care provided in the child's community All insurance accepted and changes in coverage accommodated	Source of care is close to home and accessible to family Minimal hassle encountered with payment Office ready for treatment in emergency situations Office is non-biased in dealing with children with special health care needs, or CSHCN Dentist knows community needs and resources (fluoride in water)
Family-Centered	Recognition of the centeredness of the family Unbiased complete information is shared on an ongoing basis	Low parent/child anxiety improves care Care protocols are comfortable to family (behavior management) Appropriate role of parents in home care is established
Continuous	Same primary care providers from infancy through adolescence Assistance provided with transitions (for example, to school)	Appropriate recall intervals are based on child's needs Continuity of care is better owing to recall system vs. episodic care. Coordination of complex dental treatment is possible (traumatic injury) Liaison with medical providers for CSHCN is improved (congenital heart disease)
Comprehensive	Health care available 24 hours per day, seven days per week Preventive, primary, tertiary care provided	Emergency access is ensured Care manager and primary care dentist are in same place
Coordinated	Families linked to support, education and community services Information centralized	Records centralized School, workshop, therapy linkages established and known (cleft palate care)
Compassionate	Expressed and demonstrated concern for child and family	Dentist-child relationship is established. Family relationship is established. Children less anxious owing to familiarity
Culturally Competent	Cultural background recognized, valued, respected	Mechanism is established for communication for ongoing care Specialized resources are known and proven if needed Staff may speak other languages and know dental terminology

to improve the access to dental care for small children, but the lack of a standardized approach for determining and measuring the effectiveness of the program makes any evaluation difficult.

The pace of development for the Dental Home concept is incredibly fast and is presented in Table 1.

The concept of a Dental Home begins at the start of the year 2000 and its aim is to establish a relationship between children at a young age and dental practitioners. Characteristic of this initial concept is: For the Dental Home to be a philosophy to be adopted by dental practices, with its focus being on the risk assessment for oral diseases and their prevention. This concept has been adapted, with slight modifications, by various organizations, but part of the elements of the Dental Home remain relatively constant: an immediate relationship between practitioner and patient; a family-oriented Dental Home; standard features adopted from the Medical Home concept, such as thorough, continuous and coordinated care.

According to Nowak and Casamassimo (2002) despite the fact that the Dental Home is most often associated with the physical place for treatment – the dental office/clinic – the Dental Home must be thought of as a philosophy, to be embraced by the dental practice [4]. The two authors develop a table, presenting the features of the Dental Home and its practical advantages (Table 2). According to them, a dental practice which begins to cater to children early on and continues to do so periodically for the rest of their lives is the ideal option for carrying out this objective. Just as newborn children are taken to their GP or pediatrician soon after birth, so too the first meeting with the dental practitioner must be done as early as possible, for the purpose of preventing and slowing down the devel-

opment of oral diseases.

Nowak and Casamassimo describe all working advantages of the Dental Home principle in detail, a majority of which include prophylactic activities for oral health, such as pre-developed work manuals, caries risk assessment, timely information regarding the patient's diet, fluorine additives, oral hygiene, proper development of the teeth and jaws. They believe that only the Dental Home concept will increase the possibilities for prophylactics and decrease oral diseases [4].

The publication by Nowak and Casamassimo in 2002 [4] is the first which focuses on the concept of the Dental Home and it received massive support. The American Dental Association (ADA) [13] approves this model and since then a number of American and non-American organizations acknowledge the Dental Home concept.

The American Academy of Pediatrics (AAP) considers that by taking a child to a dental practitioner with the aim of establishing a Dental Home (up to six months after the eruption of its first tooth or by the time the child is one year old). Thus the possibility for the prevention of the most frequent oral diseases and the fostering of oral habits that take into consideration the needs of every child is created [5].

The I-Smile Dental Home program was created in the American state of Iowa in 2006 [7]. This is a state program, run by the Department of Public Health of Iowa, which helps children receive dental care. The program has 23 coordinators, which are responsible for working with the children and their families, the dentists and their staff; school nurses, teachers, administrators and others. The program includes various prophylactic methods and practical tasks, such as fluorine prophylactics for designated groups of children, promoting dental health, through organizing various events, reading of literature in libraries, organizing health "fairs" and others, as well as expanding the concept of the Dental Home. The last report on the effectiveness of the program was published in February, 2018. Between 2005 and 2017 the number of children, who have received dental care from a dental practitioner, between the ages of 0 and 2 have increased from 4 901 to 13 955, and those between the ages of 3 to 5 – from 21 832 to 33 904 [8].

In the definitions for Dental Home of most associations, basic features such as caries risk assessment, individual prophylactic programs, pre-developed protocols and manuals for prevention, treatment of emergencies and nutritional prophylactics are included [4], [10], [14]. Most associations describe dental practitioners as providers of dental care, while the Department of Public Health of Iowa [9] and Iowa Dental Board [8] place these responsibilities in the hands of the dental hygienists and specially trained assistants.

The Maternal and Child Health Bureau of America (one of the six bureaus within the framework of the administration of health resources and services in the USA, and an agency of the US Department of Health and Human Services – MCHB), as the host of an expert meeting in 2008, concluded that the concept of the Dental Home must incorporate a team of dental hygienists, healthcare specialists in the field of primary care and health service providers among the community [9]. As a summary of this meeting, a document, which describes the various models of the Dental Home was created:

1. **Health Home Model** - combined medical home-dental model;
2. **Vertical (High-Rise) Model** - most complicated care would be provided by a dentist, and lower levels of care would be provided by a dental hygienist;
3. **Dispersion (Low-Rise) Model** - the entire community serves as the dental home, and community resources are integrated to serve the population's oral health needs. Children receive preventive care (dental sealants and fluoride varnish) at school, risk assessment and education from their primary care health professional, and needed restorative treatment at a private dental practice;
4. **Two-Tiered Model** - both vertical and dispersion models;

In 2011, in Texas, a program for establishing a Dental Home is carried out for the first time for children with Medicaid (a joint federal and state health program of the USA, which helps cover the medical expenses for people with limited income and recourses). The program covers children between 6 and 35 months of age. The

program provides for the children 10 preventative and educational visits to a dental practitioner, who operates in accordance with the Dental Home principle [15]. The results show that these prophylactic visits have a positive influence on the parents in Texas, by increasing their knowledge regarding oral health.

Nationwide programs have been created in Europe and America, the aim of which is to improve the access to practices operating in accordance with the Dental Home principle. The methods and target groups of these initiatives are different and vary, but their overall goal is to improve access to regular dental examinations. Other common aspects of the present Dental Homes are an immediate relationship between the pediatric dental practitioner and the child patient. The structure of the Dental Home varies from program to program – it could be private or public, incorporate dental doctors and other medical and non-medical teams. This is why in spite of the fact the programs bear the common name Dental Home, there exists no standard as to how to put the concept into practice.

Leading is the Dental Home policy of the American Academy of Pediatric Dentistry (AAPD). It supports the concept for creating a Dental Home for all children, teenagers and for children with special health needs. The Dental Home incorporates all oral care provided through collaboration between the patient, the parents, pediatric dentistry specialists and any other medical staff in some way related to the care for the small child (obstetricians, neonatologists, pediatricians, gynecologists and so on). A Dental Home is created when a contact is established with this whole team of specialists, which leads to an increased awareness regarding all matters, relevant to the betterment of the oral health of the patient. [2] [10]. The establishing of a Dental Home is a way of providing comprehensive and high-quality dental care, a Dental Home is not a place, a physical entity or an institution [3]. Due to this fact, the interpretations on how to put into practice the basic recommendations and policies of the Dental Home are numerous.

According to the AAPD and its concept regarding the basic policies of the Dental Home [3], every practice operating on this principle must provide:

- A complete, continuous, accessible, family-oriented, coordinated, compassionate and effective care for the child [2], [16];
- Treatment for all oral diseases, emergency care, periodic prophylactic examinations [17];
- Thorough risk assessment for oral diseases (caries and periodontal diseases) [18] [19] [20];
- An individual prophylactic program, after assessment of the oral condition and caries-risk [17];
- Directions regarding the growth of the teeth and jaws [18];
- Acute and chronic trauma management [21];
- Information regarding the proper care for the teeth, gums and the oral mucosa [22] [23] [24] [25];
- Nutritional consultations and prophylactics [26];

Since the creation of the Medical and Dental Home, it has been proven that dental care and prophylactics methods for home application presented to the patients are more effective and cheaper than when they are performed in medical centers for emergency care or hospitals [27]. There exists clinical evidence for the effectiveness of early, professional dental care, that adopts the Dental Home policies and is complemented by caries risk assessment and regular prophylactic examinations [28]. Children at a pre-school age, included in the Medicaid program, exhibit more frequent prophylactic visits at the dentist's office and lower dental treatment expenses [28]. Besides the benefits of improving the oral health of children, operating on the Dental Home principle also leads to a decrease in treatment expenses [29] [30]. The evidence for the necessity of creating a Dental Home is abundant. Most significant are the proven reduction in caries and the plaque index in children, who regularly visit their dental practitioner [31]. In a study conducted by Nowak et al, it was proven that children, who have been receiving dental care before the age of four have fewer obtruations, dental crowns, pulpotomies or extracted teeth due to caries, in comparison with children who have sought dental care at a later age [29]. The creation of a Dental Home guarantees that the child will receive adequate

dental healthcare, and this, in turn, will decrease the proliferation of certain oral diseases, such as early childhood caries [22].

Various Dental Home models, which have been put into practice, exist in America – I Smile Dental Home Project, First Smiles – A First 5 Oral Health and Training Program, Klamath County Early Childhood Cavities Prevention program, West Virginia University Childhood Oral Health Project and others. Pediatricians, family doctors, nurses, dental assistants can be trained to easily and efficiently carry out a caries risk assessment, to identify the risk factors, to educate and train people, who care for small children [5] [32]. One of the primary strategies, used for early childhood caries prevention, is the training of pregnant women and mothers/parents regarding proper nutritional, oral hygiene and behavioral habits in raising infants and small children [22]. Every Dental Home operates on this principle. The Dental Home addresses the significance of early caries prevention by implementing optimal prevention strategies, chosen according to the individual risk assessment for each patient [3]. The Dental Home must maintain professional contact with all specialists in the area of healthcare, who are in contact with pregnant women, mothers and babies, and who must participate in the education of parents and train them in effective methods for early childhood caries prevention [30].

Little information regarding the concept of the Dental Home in Bulgarian scientific literature exists. Kabaktchieva and Gateva (2012) are the first to publish an article, introducing the idea for the creation of a Dental Home in the pediatric dental practice [12]. Two dental practices in Sofia began operating, using the Dental Home principle, with 210 children as participants in the program. Experience shows that the idea of creating a Dental Home is well received by mothers, who cooperate during examinations and follow the control examination schedule for their children.

The creation of a Dental Home in Bulgaria is a major challenge for a majority of the dental practitioners. The concept is not well known enough also to gynecologists, pediatricians, pregnant women and young mothers. The concept places the responsibility for the creation of a Dental Home for each child on the pediatric dental practitioners, in cooperation with gynecologists and pediatricians.

The authors of this article support the philosophy and the idea behind the Dental Home concept, and believe that a clinical practice operating on this principle is the best way of assuring good oral health in children. Oral health is an important component of the overall health of a person and good oral health must be maintained throughout one's whole life. Care for the oral health is a multifaceted process and it hinges on the attitude of medical specialists towards the health habits of the population.

Education and training in oral care are an inseparable part of the preventative programs for reduction of dental caries. Care for the oral health of the baby must begin as early as the pregnancy period, and the first examination by a dental practitioner must be performed once the first primary tooth of the newborn has erupted [17]. A survey done by the World Dental Federation (FDI), in more than 10 countries, shows that only 13 % of parents take their children to the dentist before their first year. A study among pediatricians and GPs in Ohio regarding their awareness of the Dental Home concept shows that it is familiar to only 18 % of general practitioners [33]. A survey by the authors of this article of 41 mothers and small children (2017) shows the following results: 26 (63.41 %) of the women surveyed have not been advised by their gynecologist, during the pregnancy period, to carry out a prophylactic examination, while the remaining 15 (36.59 %) have been advised to do so. Of these 15 women, 12 have followed their gynecologist's advice and had a consultation with a dental practitioner, which was beneficial. Only 8 (19.51 %) of pediatricians (general practitioners) have advised mothers to take their children to visit a dental practitioner at an early age. The remaining 33 (80.48 %) mothers have received no such advice [34].

Pregnant women, infants and small children are respectively in constant contact with gynecologists and pediatricians long before they come into contact with dental practitioners [14] [35]. In order for a Dental Home to be created, it is necessary for future parents and parents with small children to be directed towards an early consultation with a pediatric dental specialist, who will familiarize them with the prophylactic

goals and the nature of the Dental Home [36]. Pediatricians are the specialists that can and should encourage mothers and their youngest patients to have their first visit to a dental practitioner [37].

A Swedish study shows that consultations on proper nutrition and oral health care can lead to a 65 % reduction of caries in children, in comparison to the control group [38]. Another Swedish study concludes that the proliferation of caries among children, whose mothers have been consulted regarding oral health, has been reduced by 42 % in four years [39]. In a study done during 2008, based on oral health training of pregnant women, women with children six months of age and women with children one year of age, it was concluded that these early consultations lead to a significant reduction in the proliferation of caries in early childhood [40]. It is known that good oral health persists in those children after they pass the ages of six and seven. There exist other studies supporting education and the promoting of caries prevention. Plutzer K and Spencer AJ traced the effect of early training of mothers, which could be so powerful so as to have a lasting influence on caries reduction for many years [41]. In part of the studies, the education of mothers and pregnant women was carried out through special health workshop seminars by health workers and not dental practitioners [42]. These mothers, the authors conclude, had increased their knowledge regarding oral health and proper dental care, and have changed their health habits. A study of 460 mothers with children between the ages of six to eighteen months was conducted in India, in 2009. The mothers were divided into three groups of 160 each – group A and group B were trained in proper nutrition and oral hygiene, through various motivational and educational materials, while group C was the control group. Eight months later caries were found in 23 % of the children in group C, and in comparison only 9 % and 14 % respectively in group A and B [43].

The educational methods for pregnant women and mothers of small children may have varied – seminars, lectures, brochures, fliers, video materials and others. Lecturers at a Turkish university compared three different methods for education in oral hygiene – brochures, video materials and special models training. Six months later they compared the results between all three groups. The results show that all three models of training are effective in improving the oral health of children, with video materials having the greatest effect [44].

Another study was aimed at comparing the effectiveness of traditional educational brochures and electronic applications in improving oral health knowledge and oral hygiene among students from Damask, Syria. The children that participated in the study were divided into two groups – on received educational brochures and the other received electronic education. The results show that brochures are more appropriate and economically effective at improving the oral health of Syrian children, when compared to electronic education, and they can be proposed as educational tools in school programs for health training at school [45]. Regardless of this, the authors believe that electronic education has its place in school educational programs.

The computer systems used for online training are convenient and flexible, according to Ali et al [46]. Health specialists face a challenge when it comes to education, and because of this web based training is an ideal environment according to Atack and Rankin [47]. In 2008, Cook et al conduct a meta-analysis of 201 studies on the use of the internet by healthcare specialists for the purpose of training, and established that regardless of the topic of the training and the vocation of the trainee (pediatrician, nurse, dentist, medical student and so on), all studies show positive results [48].

Conclusion: Early childhood is considered the perfect period for the fostering of good oral habits and the adoption of behavioral models by children and parents. Any risk behavior related to nutrition and/or oral hygiene during the first year of life may persist throughout the whole childhood period. Pregnant women and mothers of small children must be targeted as a priority group for training in relation to early dental prophylactics. Studies show that the effects of early training of mothers may be so powerful so as to have a lasting influence on caries reduction for many years [41].

In support of the idea for the creation of a Dental Home, the authors of this article are

working on the creation of an educational program for pregnant women and mothers that uses a contemporary approach for the popularization and application of medical information and knowledge through a website. The idea is through the internet to encompass the maximum number of mothers and their children, so that they could receive current information regarding dental care for their children. Parallel to that a live connection will be established with all interested and concerned parents, so that they can be provided with training, monitoring and treatment for their children at an early age for as long as they may need it.

In recent years, digital technologies have begun to take over our day-to-day lives at an ever faster pace. In today's dynamic life, the interned is a determining factor for the way we communicate, shop, travel and manage our resources overall. This trend offers an opportunity for the creation of a website for a convenient, fast and easy way to familiarize mothers and pregnant women in Bulgaria with the objectives of the Dental Home, as well as to train them in the basic steps for fostering their children's oral health and well-being. For this reason the authors of this article will create a website, which will be in Bulgarian and which may help attract an ever larger group of people, interested in the improvement of the oral health of their children. On this internet platform there will be advice, video-clips, graphs, links to other resources, news articles and numerous other things, with the aim of promoting the concept of the Dental Home and introducing its contents and functions, and as a result of this – increasing the knowledge of mothers, pregnant women, and children regarding oral health.

Acknowledgement - This work was supported by the Council of Medical Science at the Medical University of Sofia, Bulgaria under GRANT-2019 Project with Contract No. 87/ 23.04.2018.

References:

1 American Academy of Pediatrics. Ad Hoc Task Force on Definition of the Medical Home: The medical home. Pediatrics. 1992;90:774.
2 American Academy of Pediatric Dentistry. Definition of dental home. Pediatr Dent. 2018;40(6):12.
3 American Academy of Pediatric Dentistry. Policy on the dental home. Pediatr Dent. 2012;30(7):22-3.
4 Nowak AJ, Casamassimo PS. The dental home: a primary care oral health concept. J Am Assoc. 2002;133(1):93-8.
5 American Academy of Pediatrics. Policy statement: Oral health risk assessment timing and establishment of the dental home. Pediatrics. 2003;111:1113-1116.
6 Sia C, Tonniges TF, Osterhus E, Taba S. History of the medical home concept. Pediatrics. 2004;113(5 Suppl):1473-8.
7 Rodrigers T, Meister S, Russell B. Inside I-smile. Annual report on Iowa's dental home initiative for children 2013. Iowa Department of Public Health.
8 Rodgers T, Schowalter B, Meister S. Annual Report on Iowa's Dental Home Initiative for Children Iowa Department of Public Health. Bureau of Oral and Health Delivery Systems. 2018.
9 National Maternal and Child Oral Health Resource Center. The dental home: Summary from an MCHB expert meeting. 2008.
10 American Association of State and Territorial Dental Directors. First Dental Visit by Age One. 2012.
11 Glassman P, Harrington M, Mertz E, Namakian M. The virtual dental home: implications for policy and strategy. CA Dent Assoc. 2012;40(7):605-611.
12 Kabaktchieva R, Gateva N. The idea "Dental dome" in the pediatric dental practice. Clinic pediatrics. 2012;4:18-23.
13 American Dental Association. The Dental Home It's Never Too Early to Start. A Joint Project of The American Academy of Pediatric Dentistry Foundation, The Dental Trade Alliance Foundation and The American Dental Association. 2007.
14 Office of Head Start. The importance of helping children and pregnant women establish a dental home. 2014.
15 Thompson CL, McCann AL, Schneiderman ED. Does the Texas First Dental Home Program improve Parental Oral Care Knowledge and Practices? Pediatr Dent. 2017;39(2):124-129.
16 American Academy of Pediatrics. Joint Principles of the Patient-Centered Medical Home. 2007.
17 American Academy of Pediatric Dentistry. Periodicity of examination, preventive dental services, anticipatory guidance/counseling, and oral treatment for infants, children, and adolescents. Pediatr Dent. 2018;40(6):18-19.
18 American Academy of Pediatric Dentistry. Caries-risk assessment and management for infants, children, and adolescents. Pediatr Dent. 2018;40(6):205-12.
19 Ramos-Gomez F, Yasmi CO, Ng MW. Caries risk assessment, prevention, and management in pediatric dental care. Gen Dent. 2010 505-517.
20 American Academy of Periodontology. Periodontal diseases of children and adolescents. J Periodontol. 2003;74(11):1696-70.

21 Malmgren B, Andersen JO, Flores MT. International Association of Dental Traumatology guidelines for the management of traumatic dentalinjuries: 3. Injuries in the primary dentition. Dental Traumatol. 2012;28(3):174-82.
22 American Academy of Pediatric Dentistry. Policy on early childhood caries: Classifications, consequences and preventive strategies. Pediatr Dent. 2017;39(6):59-61.
23 Kagihara LE, Niederhauser VP, Stark M. Assessment, management, and prevention of early childhood caries. J Am Nurse Pract. 2009;21:1-10.
24 Silva CM, Marcelo MM. Oral features in newborns Journal of Dentistry for Children. 2008;75(1).
25 American Academy of Pediatrics. A Pediatric Guide to Children's Oral Health. 2009.
26 American Academy of Pediatric Dentistry. Policy on dietary recommendations for infants, children and adolescents. Pediatr Dent. 2018;40(6):65-67.
27 Allareddy V, Nalliah RP, Haque M, Johnson H, Tech SR. Hospital-based emergency department visits with dental conditions among children in the United States: Nationwide epidemiological data. Pediatr Dent. 2014;36(5):393-9.
28 Savage MF, Lee JY, Kotch JB, Vann WF. Early preventive dental visits: effects on subsequent utilization and costs. Pediatrics. 2004;114(4):e418-23.
29 Nowak AJ, Casamassimo PS, Scott J, Moulton R. Do early dental visits reduce treatment and treatment costs for children? Pediatr Dent. 2014;36(7):489-93.
30 Kolstad C, Zavras A, Yoon R. Cost-benefit analysis of the age one dental visit for the privately insured. Pediatr Dent. 2015;37(4):376-80.
31 Abanto J, Celiberti P, Braga MM, Vidigal EA, Cordeschi T, Haddad AE, Bönecker M. Effectiveness of a preventive program based on caries risk assessment and recall intervals on the incidence and regression of initial caries lesions in children. Int J Paediatr Dent. 2015;25(4):291-9.
32 Pierce KM, Rozier RG, Vann WF. Accuracy of pediatric primary care providers' screening and referral for early childhood caries. Pediatrics. 2002;109(5):e82.
33 Hammersmith KJ, Siegal MD, Casamassimo S, Amini H. Ohio dentists' awareness and incorporation of the dental home concept. J Am Dent Assoc. 2014;144(6):645-653.
34 Bogovska-Gigova R, Kabaktchieva R. First visit to the Dental Home. Problems of Dental Medicine. 2018. 44(2):28-34.
35 Milgrom P, Ludwig S, Shirtcliff RM. Providing a dental home for pregnant women: a community program to address dental care access-a brief communication. J Public Health Dent. 2008;68(3):170-173.
36 Girish Babu KLaDGM, Babu KG, Doddamani GM. Dental home: Patient centered dentistry. J Int Soc Prevent Communit Dent. 2012;2:8-12.
37 Hoeft KS, Barker Jc, Masterson EE. Maternal Beliefs and Motivations for First Dental Visit by Low-Income Mexican-American Children in California. Pediatr Dent. 2011;33(5):392-398.
38 Holst K, Kohler L. Preventing dental caries in children: report of a swedish programme. Dev Med Child Neurol. 1975;17(5):602-4.
39 Holm AK, Blomquist HK, Crossner CG, Grahnen H, Samuelson G. A comparative study of oral health as related to general health, food habits and socioeconomic conditions of 4-year-old Swedish children. Community Dent Oral Epidemiol. 1975;3(1):34-9.
40 Plutzer K, Spencer AJ. Efficacy of an oral health promotion intervention in the prevention of early childhood caries. Community Dent Oral Epidemiol. 2008;36(4):335-46.
41 Pulzer K, Spencer AJ, Keirse MJ. Reassessment at 6-7 years of age of a randomized controlled trial initiated before birth to prevent early childhood caries. Community Dent Oral Epidemiol. 2012;40(2):116-24.
42 Macintosh AC, Schroth RJ, Edwards J. The impact ot community workshops on improving early childhood oral health knowledge. Pediatr Dent. 2010;32(2):110-7.
43 Manchanda K, Sampath N, De Serkar A. Evaluating the effectiveness of oral health education program among mothers with 6-18 months children in prevention of early childhood caries. Contemp Clin Dent. 2014;5(4):478-483.
44 Demiriz L, Dede FO, Balli U. Impact of Three Different Education Methods on Oral Hygiene and Theoretical Knowledge of Schoolchildren. Pesquisa Brasileira em Odontopediatria e Clinica Integrada. 2018;18(1):e3897.
45 Bardaweel SA, Dashash M. E-learning or educational leaflet: does it make a difference in oral health promotion? A clustered randomized trial. , BMC Oral Health 2018, 18:81. 2018;81:18.
46 Ali NS, Hodson-Carlton K, Ryan M. Students' perceptions of online learning: Implications for teaching. Nurse Educator. 2004;29(3):11-115.
47 Atack L, Rankin J. A descriptive study of registered nurses' experiences with webbased learning. Journal of Advanced Nursing. 2002;40(4):457-465.
48 Cook DA, Levinson AJ, Garside S, Dupras DM, Ewin PJ, Montori VM. Internet-based learning in the health professions: A meta-analysis. Journal of American Medical Association. 2008;300(10):1181-1196.

Address for correspondence:
Ralitsa Todorova Bogovska-Gigova
Medical University – Sofia,
Faculty of dental medicine,
Department of Pediatric Dentistry
Georgi Sofiisky 1 str.,
Phone: 00359 02 9533469, 00359 883356030,
Ralitsa.bogovska88@gmail.com