



Use Overview of Pediatric “Dental-Voucher” in Portugal

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Abstract

Oral diseases are common, multifactorial diseases with great impact in general health and quality of life. More than 3.9 billion people worldwide are affected by this situation. The two most common oral diseases are dental cavities and periodontal disease. Portugal has one of the highest oral disease prevalence among EU Member States. Due to its frequency, its preventable character and the need to reduce costs, Portuguese health authorities agreed on the creation and implementation of a national program for prevention of oral disease. The “dental-voucher” is an activity integrated in the National Program for Oral Health Promotion in Portugal for pediatric and some susceptible groups for oral diseases aimed at promoting the prevention of these diseases. It has been shown that children and adolescents are the biggest beneficiaries of the “dental-voucher” representing 85% of all emitted vouchers. A score reduction was noticed on permanent decayed, missing and filled teeth (DMFT index), which at age 12 was 2.95 in the year 2000, 1.48 in 2006, and fell to 1.18 in 2013. The introduction of the “dental-voucher” in the National Program for Oral Health Promotion seems to be an effective strategy for primary and secondary prevention of Oral diseases at controlled costs. In Portugal, the prevalence of dental caries in children has been decreased since the implementation of oral health programs as the national reports have shown.

Keywords

Oral health, Children oral health, Dental-voucher, Health program, Portuguese oral health

Introduction

Oral diseases are common, multifactorial diseases with great impact in general health and quality of life of the population, afflicting more than 3.9 billion people worldwide [1,2]. The two most common oral diseases are dental cavities and periodontal disease [1].

While periodontal disease affects mostly adults, dental cavities can occur from the moment the teeth erupt, which explains its high frequency within the pediatric population. According to the World Health Organization (WHO), 60 to 90% of school children worldwide suffer from dental cavities [3].

Portugal has one of the highest oral disease prevalence among EU Member States. The prevalence of caries in the Portuguese general population varies in different regions and is between 23-33% [4].

A WHO report in 2000 shows that 68% of the 184 countries analyzed had a score of permanent decayed, missing and filled teeth (DMFT index) below 3 among children at 12 years of age. In Portugal, in 1999, the DMFT index at age 12 was 3.1 [5].

The score of permanent decayed, missing and filled

teeth (DMFT index), which was introduced by Klein, Palmer and Knutson in 1938 and modified by World Health Organization (WHO), measures the prevalence of dental caries/teeth [6].

The index DMFT is determined by direct oral examination done by trained health professionals who perform the sum of permanent decayed, missing and filled teeth giving them a single value to each. A score of 1 to 4 is a low caries status, 5 to 9 is medium, and more than 9 is a high caries status [6].

Several studies have shown the importance of the integration of an oral health promotion program into the public health system, allowing a better awareness of oral health, provision of sufficient dental health service and better quality of life and health for the population [7].

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Received: February 21, 2017; **Accepted:** April 10, 2017;
Published online: April 12, 2017

Citation: Takara TM, Almeida I, Reis M, et al. (2017) Use Overview of Pediatric “Dental-Voucher” in Portugal. Clin Pediatr Res 1(1):14-17

Due to the high frequency of oral diseases, its preventable character and the need to reduce costs, Portuguese health authorities agreed on the creation and implementation of a national program for prevention of oral disease [1].

History of oral health programs in Portugal

In Portugal, there is a tendentially free National Health System (NHS), inspired by Beveridge's English model, but since its beginning, the NHS did not have oral health professionals in sufficient numbers to meet the needs of the population. Therefore, most oral health services were concentrated in the private sector [8].

There has been a growing awareness towards Oral Health promotion and prevention in Portugal in the past few decades. In 1986, the first health promotion activities were held under the responsibility of the Portuguese General Health Directorate (DGS), a central service of the Health Ministry, endowed with administrative autonomy and integrated in the direct administration of the Government. These activities targeted only kindergarten and elementary school children. At the time, due mostly to the lack of specialized human resources, those activities have had little to no impact on those children's oral health [1,9].

The Oral Health Promotion Program for Children and young people was developed in 1999 and included not only oral health promotion actions, as well as dental treatments performed by specialized professionals. Only a small percentage of the eligible pediatric population (2, 81%) had access to those treatments and the situation remained unchanged until 2005 [1].

Trying to respond to the Portuguese basic oral needs, the collaborative work of the DGS and the Portuguese Dental Association led to the birth of the National Program for Oral Health Promotion in 2005. Three years later, the “Dental-voucher” project was launched [8], and initially headed the group of children and young people, having gradually been extended to other population groups considered most vulnerable to oral disease [10].

About the “Dental-Voucher”

In 2008, the National Program for Oral Health Promotion was revised and restructured, increasing the coverage of preventive care and dressings provided by specialized professionals, in order to achieve and maintain a good oral health throughout life.

The “dental-voucher” gives access to the services provided by a network of dental health professionals. In addition to children and young people, other high risk groups are eligible for oral disease control, such as pregnant women, the elderly, and adults infected with HIV.

Up to three vouchers are issued, being the first issued by the local Public Health Unit, and the others by providers of oral health care in accordance to the established rules for this activity. The “voucher” covers for the treatment of two carious teeth and placement of sealants in remaining healthy teeth, and costs € 35.00 each [10].

The individual preventive and curative care is carried out by oral health professionals, through consultations aimed at children and young people aged from 3 to 18 years-old in functional units of public health care or in private practice. The access to consultations is done through the issuance by the health unit of a referral document for oral hygiene consultation or “dental-voucher”:

- To all children aged 7, 10 and 13 years old, each Public Health Unit is responsible for issuing the suitable referral documents and for delivering them in schools (public schools or private institutions of social solidarity). For those who are free of dental caries on permanent teeth, referral documents for oral hygiene consultations are emitted, while children with dental caries lesions on permanent teeth are given “dental vouchers”.
- These vouchers may be issued by Family Doctors and given directly to parents or guardians of children aged 3 to 6-years-old that have temporary teeth with caries and infectious symptoms that require medical and dental urgent intervention (For example pain or abscess) and; of children and youths aged 8, 9, 11, 12, 14 to 18 years-old, who need treatment of dental caries lesions [11].

Program Indicators

In 2014, the Portuguese Healthcare Regulation Authority published a report that assessed the rate of emission and utilization of “dental-voucher”, among other outcomes. Data was gathered from Continental Portugal's five regional health administrations (North, Center, Lisbon and Tagus Valley, Alentejo and Algarve) between the years 2008 and 2013 [12].

The research group verified that children and adolescents are the biggest beneficiaries of the “dental-voucher”, representing 85% of all emitted tickets. During the study period, the number of “dental-voucher” emitted increased each year in all five regions. They also found that the emission rate reaches its peak in 2013 for four of the five regions. The Northern region presented both the highest emission and utilization rates for “dental-voucher” during that four-year period.

Although the increasing vouchers' emission that did not result in similar utilization rates between 2012 and 2013, probably due to economic crisis, such as transportation costs and other costs not covered by the voucher.

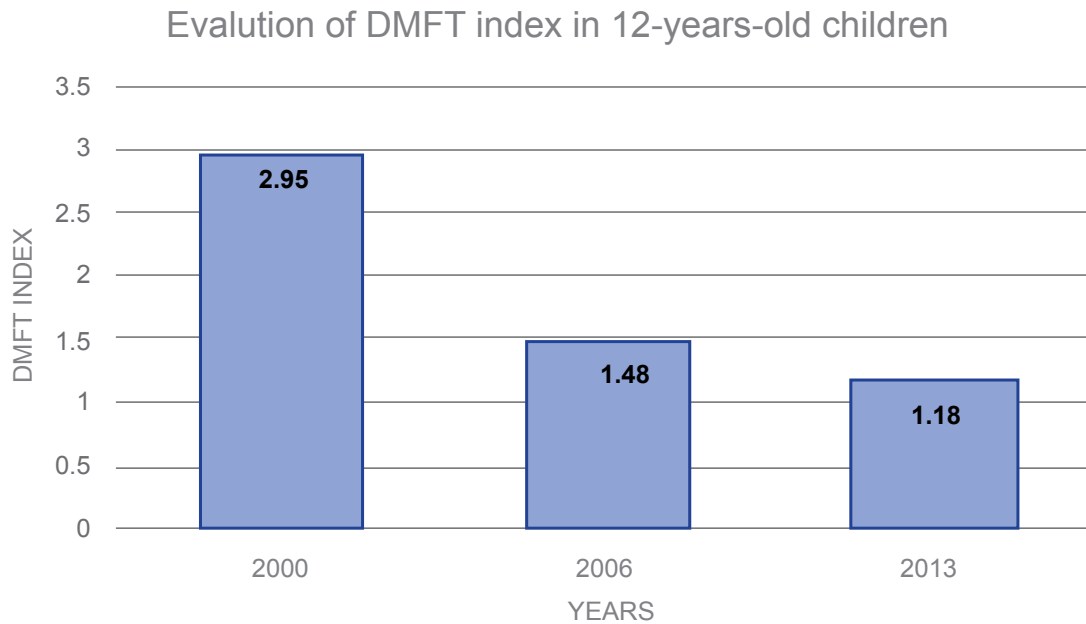


Figure 1: Index evaluation of permanent decayed, lost and filled teeth (DMFT index) in children aged 12 years-old during the years 2000, 2006 and 2013 in Portugal [13].

The voucher usage percentage has also grown between 2010 and 2012, revealing a bigger participation of the population in this project. On the other hand, between the years 2012 and 2013, it has not been any augmentation of the utilization of the vouchers in all health regions, with some of those presenting a decrease of the utilization. This may have something to do with economic restraints, namely transportation costs [12].

Another DGS report from 2015 evaluated the oral health status of children and young people aged 6, 12, and 18 years-old. It is important to note that in the previous report to the 2015 developed by the DGS, the cohorts were made for 6, 12 and 15 years of age, that after extension of the program, the latter report was developed with new cohorts of 6, 12 and 18 of age [13]. The following results were found:

- There was a reduction in the score of permanent decayed, missing and filled teeth (DMFT index), which at age 12 was 2.95 in the year 2000, 1.48 in 2006, and fell to 1.18 in 2013. These data are shown in the Figure 1;
- There was an increase in the percentage of young people with healthy gums who in 2006, at 12 years was 29% and at 15 years it was 22%, while in 2013 at 12 years it was 51.7% and at 18 years 41.8%;
- Increase in the average number of teeth with cleft sealants that in 2006 at 12 years was 1.60 and at 15 years it was 0.86 and in 2013 at 12 years it was 3.61 and at 18 years it was 1, 31;
- Increase in the percentage of children and young people

brushing their teeth at night before bedtime, which in 2006 at 6 years was 35%, at 12 years 51% and at 15 years was 45%, while in 2013 at 6. This percentage was 84%, at 12 years, 87% and at 18 years 84% [13].

An inquiry to dental health practitioners was conducted to assess their opinion on whether the introduction of this project had improved Portuguese oral health or not. The majority (89%), both nationally and regionally, thinks that the “dental-voucher” had contributed for a better oral health among the Portuguese population [10].

“Dental Voucher” Considerations

Based on the data retrieved from the European Union Statistics on Income and Living Conditions survey of 2011 (EU-SILC), lower-income people are neglecting their oral health needs due mainly to the high costs of treatments and consultations (68% of the respondents) [10].

In fact, in 2013, the Organization for Economic Co-operation and Development (OECD) stated that is necessary to reduce the existing financial barriers in order to grant equal access to Oral Healthcare consultations [10].

In the eyes of the Portuguese health authorities, the creation of this “dental-voucher” would assure, at least, the treatment of those included in the most vulnerable groups, independently of their economic situation, thus aiming to reduce the existing inequity of access.

In its 2009 audit to the Portuguese National Program for Oral Health Promotion, the Portuguese Court of Audits (in Portuguese, Tribunal de Contas), equivalent to

the General Accounting Office of the United States, stated that the “dental-voucher” does not grant a universal access to Oral Healthcare, since children enrolled in Private schools are not eligible for the voucher [10].

Another limitation of the program, as stated by The Portuguese Healthcare Regulation Authority in its report from 2014, is the existence of a maximum number of “dental-vouchers” that can be issued, as well as an established set of treatments covered by the voucher, that may fall short from one’s true oral health necessities [10]. Also, the issue of a second “dental-voucher” to the same beneficiary depends on the diagnosis and treatment plan defined by the dentist during the first consultation.

Final Comments

The introduction of the “dental-voucher” in the National Program for Oral Health Promotion seems to be an effective strategy for primary and secondary prevention of Oral diseases at controlled costs. In Portugal, the prevalence of dental caries has decreased in children and young people in recent years, since the implementation of oral health programs as the national reports have shown [1].

Despite the short existence of the “dental-voucher”, seems to have been a positive improvement in the pediatric oral health. In addition, the program is constantly expanding and it is expected that the population’s oral health will be improved in the medium and long term.

However, it is important that the program gradually achieve universal coverage of the population, besides that is necessary to carry out more studies regarding the cost-benefit of the program and constant analysis of its results to guarantee the effectiveness of the program and to fit it to the needs of the all population.

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