Health Policy 119 (2015) 117–126

Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol

The use of dental services for children: Implications of the 2010 dental reform in Israel

Shosh Shahrabani[a,*], Uri Benzion[b], Yaffa Machnes[c], Assaf Gal[d]

[a] Economics and Management Department, The Max Stern Yezreel Valley College, Israel
[b] Economics Department, Western Galilee College, Israel
[c] Graduate School of Business Administration, Bar-Ilan University, Israel
[d] The Ben-Gurion University, Israel

ARTICLE INFO

Article history:
Received 10 May 2014
Received in revised form 3 November 2014
Accepted 8 November 2014

Keywords:
Dental reform
Children
Oral health

ABSTRACT

Routine dental examinations for children are important for early diagnosis and treatment of dental problems. The level of dental morbidity among Israeli children is higher than the global average. A July 2010 reform of Israel's National Health Insurance Law gradually offers free dental services for children up to age 12.

The study examines the use of dental services for children and the factors affecting mothers' decision to take their children for routine checkups. In addition, the study examines the impact of the reform on dental checkups for children in various populations groups.

A national representative sample comprising 618 mothers of children aged 5–18 was surveyed by telephone. The survey integrated the principles of the health beliefs model and socio-demographic characteristics.

The results show that mothers' decision to take their children for dental checkups is affected by their socio-demographic status and by their health beliefs with respect to dental health. After the reform, the frequency of children's dental checkups significantly increased among vulnerable populations. Therefore, the reform has helped reduce gaps in Israeli society regarding children's dental health. Raising families' awareness of the reform and of the importance of dental health care together with expanding national distribution of approved dental clinics can increase the frequency of dental checkups among children in Israel.

1. Introduction

Routine dental checkups for children are important for early diagnosis and treatment of dental problems. World Health Organization comparisons among countries whose life expectancy and welfare status are similar to those of Israel indicate that Israel has the highest ratio of dentists per population [1]. However, results of a WHO survey of 12-year-old children in 188 countries concerning dental health showed that the dental morbidity rate among Israeli children is higher than the world average [2]. A 2002 survey of 12-year-old children found an average of 1.66 damaged teeth and revealed that only 46% of the children did not exhibit dental caries [3]. Additionally, a survey conducted among Israeli military recruits showed that the dental health of Israeli teenagers is inferior compared to other western countries [4].

In a recent OECD survey of 29 OECD countries, five were found to provide full coverage for the cost of dental health services: Austria, Mexico, Poland, Spain and Turkey [5]. In

* Corresponding author at: Department of Economics and Management, Yezreel Valley College, P.O. Emek Yezreel 19300, Israel.
Tel.: +972 46423526; fax: +972 46423522.
E-mail address: shoshs@gmail.com (S. Shahrabani).

http://dx.doi.org/10.1016/j.healthpol.2014.11.007
0168-8510/

addition, many countries in Europe now include universal dental schemes in their national health plan and healthcare basket, while other nations have recently recognized the importance of dental care for children [6]. In Canada, several provinces introduced uniform dental services for children but were unable to maintain this system. So far, only Ontario continues to maintain these services. As the federal government covers the costs of dental care for the poor, the other provinces do not feel pressure to maintain a universal scheme [7].

In 2012, Australia introduced dental care reform for children up to the age of 16 [8], and since January 2014 dental coverage for children is required in the USA under the Affordable Care Act (Obama Care). Thus, all children up to the age of 18 now have dental care insurance [9].

In Israel, until July 2010 dental health services were not included in the healthcare basket, and were for the most part privately funded and operated. The Ministry of Health together with the Ministry of Education tried to supply dental care to schoolchildren based on a tradition the government inherited from the Government of Palestine administered by the United Kingdom before the State of Israel was founded in 1948, but their efforts were unsuccessful. About 73% of the Israeli population has some form of supplementary health insurance [10]. The Health Maintenance Organizations offer eight different policies. Most of these offer a discount of 20% for dental care in the HMO clinics, and the more expensive policies provide better coverage for children up to the age of 18. Wealthier families usually purchase the more expensive supplementary insurance policies, while only 40% of the Arab population has any form of supplementary health insurance. Note that Arabs comprise about 28% of Israeli schoolchildren, while 20% of school-aged children are from ultra-orthodox Jewish sector [11]. Mothers in these two sectors have on average more children than the national average, they are relatively poor and most do not have any supplementary or commercial health insurance.

Adverse selection is a common phenomenon in the dental insurance market, making it expensive with high deductible and co-payment amounts. Since dental insurance and public schemes have not meet the public's needs, independent dentists successfully compete with the HMOs by offering shorter waiting times, longer hours of service, a personal relationship and better prices. Dentists are also affiliated with commercial insurance schemes. As a whole, dentists provide high quality services to those who can afford them.

Only one-third of the local government authorities in Israel provided minimal dental prevention services for first graders. Indeed, such dental services were often provided by local authorities that were classified as relatively weak, among them the Arab localities. Only one-third of Israeli schoolchildren received any sort of dental check-ups during school hours [12]. This public program demanded financial participation from the local authority, which the government was unable to enforce. In contrast, wealthy local government authorities did not provide dental health services and checkups for school pupils because the parents did not demand these, preferring to turn to private services when needed.

As a result, until 2010, children in vulnerable population groups had inadequate dental health care. In July 2010, a change in legislation in Israel led to the provision of free dental checkups and dental care for children up to the age of 8 as part of the healthcare basket, through health maintenance organizations. One year later (July 2011), this legislation was expanded to children up to the age of 10, and a year after that (July 2012) the legislation was expanded once again, so that it now includes children up to the age of 12. This change in legislation is definitely an important step toward the supply of dental health to Israeli children. Nevertheless, this step needs to be supported by increased parental demand for routine dental checkups for children, since most children are naturally dependent on their parents' decisions regarding dental exams. The advancement of preventive dental services for children will improve their dental health and their general health throughout their lives, and will also save families the high costs of dental care and reduce the Ministry of Defense's budget for dental treatment for military personnel [13].

The objectives of the current study were: (a) to examine the use of routine dental checkups among children in Israel; (b) to examine factors affecting mothers' decision to take their children for routine dental checkups; (c) to determine whether children's dental checkups have increased as a result of the 2010 reform, and to examine the impact of the reform on various population groups in Israel.

2. Literature review

Over the last two decades a number of studies have examined oral health care reforms in several countries. For example, two studies examined the major oral health care reform introduced in Finland between 2001 and 2002 [14,15]. This reform led to the opening of the Public Dental Services (PDS) and extended subsidies for private dental services to all adults. (Before the reform, children, young adults and special needs groups were entitled to public dental care and treatment.) The findings of Niiranen et al. [14] indicate that in 2000, prior to the reform when access to publicly subsidized dental services was restricted to those born in 1956 or later, every third adult used the PDS or subsidized private services. By 2004, when subsidies had been extended to the entire adult population, this figure increased to almost every second adult. In three consecutive surveys of the Finn population (2001, 2004, 2007), Raittio et al. [15] showed that between 2001 and 2007 the percentage of respondents who regularly sought dental care rose. In particular, the proportion of respondents who used the Public Dental Services increased, while the average number of visits to private dentists decreased between 2001 and 2007. Both studies conclude that in Finland the equity and fairness of the oral health care provision system has improved due to the reform.

As part of a 2006 statewide health reform in Massachusetts (USA), dental benefits were extended to include all adults aged 19–64 whose annual income was at or below the federal poverty level. Nasseh and Vujicic [16] examined the impact of this reform and found that it led to an increase