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RESEARCH REPORT

Patterns of Utilization and Experiences of Children in Dental Care Following the Reform of Dental Care in Israel

Yael Ashkenazi ✦ Ariel Yankellevich ✦ Shlomo Zusman ✦ Lena Natapov

The study was funded by the Israel National Institute for Health Policy Research

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Executive Summary

Background

Oral health is closely linked to general health and has a considerable impact on quality of life. Oral health problems are common throughout the population. They cause pain and discomfort in the mouth and may harm the ability to chew, to receive proper nutrition and to speak, and can be damaging to physical appearance. Maintaining healthy teeth during childhood is particularly important, both in itself and in order to prevent or reduce problems in the future. Neglecting dental healthcare may have long-term implications.

Despite the importance of dental healthcare, the 1995 National Health Insurance Law, which guaranteed residents of Israel universal access to a broad package of services, did not include dental care except for a few specific groups that constitute a small proportion of the population. Since the establishment of the State, private dentists have been the primary providers of dental care and most treatments are paid for privately either directly by the patients or through health insurance.

The high cost of dental care was for many years a barrier to access for much of the population and resulted in gaps in utilization between high and low income groups. In order to improve access to dental health services (DHS) for children, it was decided in 2010 to implement a reform in the public insurance coverage for these services: Dental care for children was added to the healthcare package (with immediate effect for children up to age 8, and increasing incrementally until 2012, to cover all children up to their 12th birthday). The package gives full exemption for preventive services and provides conservative dentistry at a cost of NIS 20 per treatment covered in the package, with a ceiling of NIS 40 per visit that includes two or more treatments. The health plans are responsible for providing the service. Beginning January 2016, ages 12-13 will also be eligible.

Study Goals

The current study was intended to examine: patterns of utilization of DHS for children in general and for specific subgroups of children; barriers preventing children from seeking treatment; and the public's experience of these services in the period since the reform was implemented.
The specific study goals were:

- To examine the characteristics of the utilization of DHS both among children eligible for publicly funded services through the reform (up to 12th birthday) and among children who were not eligible for these services at the time of the study (from 12th to 17th birthday)
- To examine the public's experience of receiving DHS for children through public and private providers since the reform
- To identify differences in the characteristics of utilization among children of different population groups according to ethnic background and socioeconomic status (SES)
- To identify the barriers that prevent some parents from referring their children for treatment

- To examine changes that have occurred in the choice of treatment setting following the reform and the public perception of these settings
- To assess the implications of the study findings for further implementation and possible expansion of the reform.

Study Method

The study was based on a telephone survey of parents in families with children age 2-16 conducted from February to August 2013. The age range was divided into two groups: Children age 2-11 who were eligible for free or subsidized treatment in the public system and those age 12-16 for whom there was no public funding at the time of the study. Caution is needed in any comparison of the two groups as they differ not only with regard to inclusion in the reform, but also with regard to their healthcare needs and awareness of the importance of dental care.

Altogether 1,749 interviews were conducted and the response rate was 69%. We interviewed one of the parents in each family, and asked questions about one child in each age group, which we randomly sampled from all the children in that age group in the family (in cases where there was more than one child in that age group). The interviews were conducted in Hebrew, Arabic or Russian.

In analyzing the data, we divided the respondents into three groups based on their origin (Jewish or Arab) and SES (defined by their place of residence according to the Central Bureau of Statistics).[1] Low SES included respondents living in clusters 1-8 (out of 20), who constituted 41% of the weighted sample; medium and high SES included respondents from clusters 9-20, who constituted 59% of the weighted sample. We divided respondents with low SES into Jews (45%) and Arabs (55%). Since almost all of those in the medium and high group (98%) were Jewish, we left them as a single group.

The three groups are referred to below as Jewish with low SES, Arab with low SES, and population with medium and high SES.

Main Findings

Parents' Attitudes toward Maintaining Healthy Teeth

The study found that most of the parents believe that the condition of their teeth is an important aspect of their general health. They also believe that it is important to protect milk teeth from caries; however, only 31% of the parents reported that they thought that children should start visiting the dentist before the age of 3 (while dentists recommend starting as soon as the first teeth erupt). A non-negligible percentage (12%) responded that children need to go to the dentist only when there are problems. Jewish and Arab parents with low SES tended to the opinion that it is necessary to visit the dentist only when the children are older than 3 or when there are problems, more than did those with medium and high status.

[1] This measure is based on the CBS division of geographical units into 20 socioeconomic clusters. For a more detailed explanation, see ***Characterization and Classification of Geographical Units by the Socio-Economic Level of the Population 2008*** http://www.cbs.gov.il/publications13/1530/pdf/e_print.pdf.

Findings Regarding Children Age 2-11 (who are Covered by the Reform)

Encouragement from Medical Personnel to Seek Dental Treatment for Children

We examined whether the primary physicians who had seen the children through the health plans had provided the parents with information about the possibility of receiving dental treatment through the health plans and whether they encouraged them to have checkups. Eleven percent of the children's parents had been given information or recommendations by their family physicians or pediatricians about the possibility of receiving dental treatment through the healthcare package. Sixty-eight percent of the children had had a checkup through the DHS for schoolchildren in school or preschool in the year prior to the survey. Of these, 50% had been given a recommendation to see a dentist for treatment or a more comprehensive checkup. About half of the parents whose children had been given such a recommendation said that they had subsequently taken the child to see the dentist.

Oral Health Status

The parents of 88% of the children described their child's oral health as good or very good. When we asked about signs of oral health problems such as the frequency of pain, absence from school, and embarrassment due to dental problems, we found that children with low SES suffered more often than did those with medium and high SES. A particularly high percentage of Arab children with low SES (44%) were found to suffer from toothache at least periodically.

Brushing Teeth

Regular brushing is one of the most important ways of maintaining healthy teeth. The parents of only 37% of the children reported that they brushed their teeth at least twice a day. Twenty-seven percent brushed less than once a day. Here too, there were gaps among the socioeconomic groups: About half the children with medium and high SES brushed twice a day or more, compared with 17% of Jewish children with low SES and 33% of Arab children with low SES.

Utilization of Dental Health Services

We examined two key measures of DHS utilization: Visit to the dentist in the year prior to the survey and periodic checkups. One question related to all types of visits in the previous year, whether for a periodic checkup or for treatment of a problem. A separate question asked whether the parent was in the habit of taking the child for a periodic checkup (i.e., a routine visit when there was no problem with the teeth). These routine visits are important for keeping teeth healthy through prevention and early detection of problems.

- ***Visit to dentist during previous year:*** 64% of the children had seen the dentist in the year prior to the survey, while 25% had never been to the dentist. A multivariate analysis found that positive attitudes of parents toward dental care, recommendations from the primary physician, and checkups at school had a significant positive association with visits during the previous year. The main reasons noted by the respondents for not taking their children to the dentist in the previous year were that there had been no dental problems and that the child was too young. The cost of the treatment was given as a reason by only 2% of the parents.
    - ***Treatment setting for last visit before the survey:*** We divided the treatment settings in which children saw the dentist into 4 categories: Health plan clinics; "contracted" clinics

(private clinics that have an arrangement with the health plans so that clients pay the same as in the health plan clinics); private clinics; and other clinics (municipal, hospital or other). Seventy-one percent of the children who saw a dentist in the previous year did so with public funding: 61% in health plan clinics and 10% in contracted clinics. In addition, 26% went to private clinics and 3% received treatment in another setting. Publicly funded clinics (health plan clinics and contracted clinics) were the main setting for children from all population strata; the greatest utilization was by the Jewish population with low SES – 85% went to publicly funded clinics. In comparison, only 67% of the Arab population with low SES were treated in publicly funded clinics, similarly to children with medium and high SES – 66% of whom were treated in these clinics. Arab children also received more treatment in contracted clinics and less in health plan clinics than did Jewish children. This finding can be explained by the fact that there are almost no health plan clinics in Arab localities.

- ***Reason for last visit:*** The most common reason for the last visit was for a routine checkup at the parents' initiative (the reason for 47% of visits); 22% received treatment for an urgent problem and 21% to continue or complete treatment. Children with low SES saw the dentist for urgent problems or continued treatment more often than children with medium and high SES did; and the latter groups came for routine checkups more often than the former group.

- ***Periodic checkup:*** 45% of the parents reported that their children go to the dentist for routine checkups. We found differences based on ethnic origin (Jewish or Arab) and SES. Fifty-six percent of the children with medium and high SES go to the dentist for routine checkups, compared with 44% of the Jewish children with low status and only 23% of the Arab children with low SES. In addition, we found that the percentage of children who go for checkups increases with age – children age 6-11 do so more than those aged 2-5. A multivariate analysis found that ethnic origin (Jewish or Arab), parents' education, routine dental checkups by the parents, parents attitudes toward correct dental healthcare, and the child's age have a statistically significant association with seeing the dentist for routine checkups.

Experience of Most Recent Visit to the Dentist

- ***Waiting time for an appointment:*** 45% of the children waited for a week or less. Waiting times were shorter at private clinics and for children who needed the dentist because of an urgent problem.

- ***Satisfaction with the dentist and the clinic:*** There was a high level of satisfaction with various aspects of the dentist's work and over 85% of the respondents were satisfied to a great or very great extent with all aspects about which they were asked. The satisfaction with two aspects was statistically significantly higher in the private clinics than at health plan clinics: The way the dentists explained the problem and the amount of time they devoted to each child. Satisfaction with various aspects of the clinic was quite high. Apart from the question of price, 74% and more of the respondents were satisfied to a great or very great extent with every aspect. Satisfaction with the price was statistically significantly higher at the health plan clinics and the contracted clinics than at the private clinics and satisfaction with the attitude of the receptionists was

statistically significantly higher at the private clinics and the contracted clinics than at the health plan clinics.

- ***Oral health checks and instruction:*** At most appointments, the dentist asked whether the children brushed their teeth. However, in only about half of them were the children shown how to brush and checked to see they were doing it properly. The private clinics more often gave guidance and checked the children, and asked about the brand of toothpaste they used.

Knowledge about the Reform

Most of the parents knew about eligibility for treatment through the health plans – either free or with a small co-payment – but few knew the age range for eligibility.

Changing Setting for Dental Care

A fifth of the children who had ever been to the dentist had moved from a private or community setting to the health plans following the reform. The percentage of those who moved was particularly high among Jewish children with low SES.

Findings Regarding Children Age 12-16 (who are Not Covered by the Reform)

DHS for children age 12-16 are not currently included in the reform, but may be included in the future. We wanted to know the patterns of treatment among children ineligible for publicly funded services. In the future, if this age group becomes eligible, we will also be able to compare patterns of treatments in both situations. We asked a shorter set of questions about children of this age.

- ***Child's oral health status:*** The parents of 83% of the children described their child's oral health as good or very good. The condition of children with medium and high SES was better than that of children with low SES.
- ***Visits to dentist in the previous year:*** 69% of the children had seen the dentist. The percentage was higher among children with medium and high SES and those whose parents have a college education.
    - ***Treatment setting and reason for last visit:*** 43% of the children in this age cohort were treated at health plan clinics, 51% at private clinics and the remainder in other settings. Jewish children with low SES were mainly treated at the health plans while most Arab children went to private clinics. Children with high SES were treated at the two types of clinic almost equally. It should not be forgotten that there is no public funding for treatment of children in this age cohort in health plan clinics and they have to pay for the service, albeit usually at a lower rate than in private clinics.
    - ***Reason for seeing the dentist:*** The most common reason was for a routine checkup, followed by an urgent problem or continued treatment. Children with medium and high SES went to the dentist more often for routine checkups while those with low economic status went more often for treatment of a problem (usually urgent).
- ***Periodic checkups:*** The parents of 51% of the children reported that they see the dentist for routine checkups. Children with medium and high SES and those whose parents have a college education go more often.

Discussion and Conclusions

The study findings present a comprehensive picture of the patterns of utilization of DHS for children in Israel two years after a 2010 reform introducing services for children into the national health service package was implemented. The study focused on children whom the reform has already included in the service package but it also included older children who do not currently receive services in the package.

The findings indicate that the public is highly responsive to the services offered through the reform. The public clinics (health plan clinics and contracted clinics) are the main setting for children in the relevant age cohort. This finding is true of children in all population groups including those with medium and high SES. This is a particularly important finding since it dispels the misapprehension that strong populations avoid public services, which may be looked upon as serving those who are less well off financially. The utilization of publicly funded services by children of all population groups is important in order to ensure long-term quality and prevent budget cuts in the future – since DHS treat the entire population, not just the disadvantaged populations.

Jews with low SES utilize public dental services more than Arabs with low SES and children with medium and high SES. A larger proportion of Arabs with low SES continue to utilize private services. One possible explanation is that Arabs have less access to public clinics. There may also be other barriers preventing this population from coming to these clinics. In any case, it is important to examine this matter in order to promote accessible, available and equal service to the whole population.

As expected, there is a strong connection between parents' beliefs and attitudes and the care of their children's teeth. Many parents are unaware of the importance of starting dental care early and of regular routine visits that are not due to dental problems. Unawareness of these factors is particularly widespread among parents with low SES. This finding is reflected in very large gaps among population groups regarding the percentage of children who have regular checkups – with fewer of those with low SES (Arabs and Jews) going than those with medium and high SES. Commensurate with the gaps in performing periodic checkups, the study found large differences among the population groups in the reason for their last dental visit. Children with medium and high SES went mainly for periodic routine checkups. Those with lower SES went primarily for treatment of a problem – in many cases an urgent problem.

Altogether, we found a high level of satisfaction with the treatment at dental clinics, both private and public, although the satisfaction was higher among patients at private clinics.

Regarding the children aged 12-16, who were not included in the reform, we found gaps among the population groups in the percentage of those who had seen the dentist in the previous year, which we did not find among the children included in the reform. The finding regarding children aged 12-16 may indicate gaps in the accessibility of the clinics as well as gaps in awareness.

Proposed Programmatic Directions

The findings indicate several potential programmatic directions:

- ***Extending the reform to a wider age group:*** In light of the responsiveness of the entire population to publicly funded DHS and the high level of satisfaction with them, as well as the gaps indicated in the utilization of the services among populations of different SES for the older children, who are not included in the health package, thought should be given to extending the reform to additional age groups.
- ***Enhancing accessibility of the services to the Arab population:*** The survey reveals that Arabs utilize the public DHS less than the Jewish population. We believe that one of the reasons is probably the lack of accessibility. The placement of public clinics in the Arab sector (and in small localities in general) should therefore be examined and strengthened where needed. It is equally important to examine whether there are other barriers that prevent this and other populations from effectively utilizing the services offered through the reform.
- ***Outreach to populations that do not utilize the services:*** Efforts should be made to reach populations that do not utilize publicly funded services and provide them with information to help them exercise their right to the service.
- ***Increased action to raise awareness of the importance of dental health and to encourage utilization of the services:*** There is a strong connection between parents' attitudes toward maintaining healthy teeth and the correct way of doing so and the dental care provided to their children. Public education is important particularly for weaker populations who do not make frequent routine visits to the dentist. These efforts should include providing information and raising parents' awareness of the importance of routine care of their children's teeth from an early age. Public education should be culturally sensitive to the target population and focus on the problems and gaps that characterize each population.
- ***Increasing DHS for schoolchildren/preschoolers:*** The study suggests that another factor that could encourage children to seek dental care is the dental checkup program for schoolchildren. The service currently starts in kindergarten. We recommend that the service be developed further and extended to younger children (particularly given the finding that many parents are unaware of the need to start seeing the dentist at an early age) and that these checkups be used to encourage children to go for treatment and to introduce young children to good habits of brushing and maintaining oral health.
- ***Use medical appointments to provide information and encourage dental treatment:*** Family physicians and pediatricians regularly meet with children and their parents and their recommendations carry great weight. These appointments could be used to provide information and raise parents' awareness of the importance of dental health and of the fact that it is part of general health, and to encourage them to take their children to the dentist regularly and not only when there is a problem.

The study findings have been presented to the steering committee and at various forums of policymakers and professionals and the conference of the Israel National Institute for Health Policy Research.

The study was funded by the Israel National Institute for Health Policy Research

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