



Evaluation of beneficial rate of target groups from oral health care services in southern provinces of Iran in 2011 in comparison with 2010

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ABSTRACT

Oral health care as a part of primary health care system, is incorporated in health system in 1995. Based on this program, pregnant women and children of 0-12 years old are considered as target groups. The purpose of this study is the evaluation of benefit rate among target groups from governmental oral health care services in 2010 and the comparison of those services with that of 2011 namely, one year after the beginning of health sector reform in Southern Provinces of Iran. In this cross-sectional study, 268 urban and rural health care centers in southern provinces have been evaluated based on related statistical sheets in 2010 and 2011. Data entered in data sheet and analyzed by excel software. The effect of health sector reform in dental health care section in southern provinces has been successful so that this program has shown positive beneficial rate in dental services such as restorations and fissure sealant therapy in 2011 with respect to 2010. Improvements of oral health care programs such as better delivery of dental services and increase in awareness of target group in southern provinces, has caused an increase in benefit rate from dental services among them. The data obtained in this study, showed an increase in this rate in 2011 in comparison to 2010.

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Introduction

Health care services in Iran stands on the roots of primary health care (PHC) based on five principles of justice, social participation, priority of prevention to treatment, technology and availability of health care facilities⁽¹⁻⁵⁾.

In Iran in 1995, dental and oral health care was integrated, as one of the primary health care strategies, in delivery of health services throughout the country.

The purpose of this integration program was to promote oral health care services through providing a high dental treatment quality and increasing level of hygiene awareness in people. The target groups in this program are pregnant and lactating women, and children from birth to 12 years old age.

According to this program, dental services were provided for these target groups with a 70% discount in tariff of dental services such as fissure sealant therapy, restorations, fluoride therapy and scaling and root planning^(6,7).

It is worth mentioning that after designing and accomplishment of this integrated program in the whole country in 1995 and in 2007 in southern provinces, no survey or any research in Iran has been done to evaluate the productivity rate of these target groups from oral health care services. Being so, we decided to design this study. The purpose of this study is to evaluate the beneficial rate of above-mentioned name target groups from oral health care services in Southern Provinces of Iran in 2011 in comparison with 2010.

Method and Materials

In this cross-sectional study, 268 urban and rural health care centers in southern provinces were studied from 2010 to 2011 with respect to the total number of target population referred to these centers and those who received dental services. We

divided urban and rural population into four subgroups: children under six years old, children between six to twelve years old, pregnant women and others. Due to the aim of this study, no data were collected from other population which were not included within the specified target group population of this study. We evaluated statistically-related health care forms (related questionnaires specifically designed to get necessary health care information), which was available in each health care center. Then for confirmation of accuracy of statistics, we chose one urban and one rural health care center in each city by random and visited them and checked and controlled their reports again (48 centers all together).

For evaluation of validity and reliability of the reports, we visited 15 health centers and compared their statistical reports with the ones in main health care center.

The total number of population in southern provinces was taken from ministry of census and that of target groups was collected from formal documents of family health section of each of capital city of province health center.

Data were collected from special encoded statistical forms (above mentioned name related questionnaires) monthly for eight months. These forms cover demographic information and dental services such as restorations, scaling and root planning, extraction of infected teeth, visit and fissure sealant therapy which will be provided for target groups. Data obtained were reevaluated one more time for confirmation of information. Dental indices relevant to each dental service was calculated according to target population to obtain beneficial rate. Then these data were entered into data sheet according to the kind of dental service and target population and analyzed by using excel software.

One of the main problems in this study, was the presence of inconsistency in statistical reports between health care centers of small cities with that of capital cities of each province. This problem was eliminated by consultation with our specialist in statistics. Another problem was absence of similar researches being done in Iran because as stated before, to the best of our knowledge, no other similar research has been performed up to the present time in Iran to enable us to get information from the results of those articles to compare our results with them and to refer to their studies as an standard model. Thus, we referred to the limited present articles for any part of this manuscript.

Results

Based on the formal and documented statistics of the central bureau of oral health care, the total number of the population of target groups referring to health care centers and those receiving dental services in 2010 and 2011 is as follows:

Total number of pregnant women referring to these centers in 2010 and 2011 was 67037 and 97969 respectively and the number of those who received dental services in 2010 and 2011 were 26646 and 29310 respectively.

Out of 780110 children under six years old referring to these centers (436862 persons in 2010 and 343248 ones in 2011), 21579 persons in 2010 and 25864 persons in 2011 received dental services.

In case of children between the ages of six to twelve years old, 175482 persons in 2010 and 350234 persons in 2011 were referred to the centers out of which, 74281 individuals in 2010 and 97558 persons in 2011 received dental services.

In general, the total number of persons who were referred to these health care centers in southern provinces, were 679381 in 2010 and 791451 in 2011 respectively. Out of this number, 122506 persons in 2010 and 152732 individuals in 2011 received dental services.

One conclusion from data obtained from this study is that the beneficial rate of the target groups for receiving dental services such as visit, restoration, fissure sealant therapy, pulpotomy and fluoride therapy was higher in 2011 than 2010 (positive rate) and lesser in teeth extraction, scaling and root planning, and radiography in 2011 with respect to that of 2010 (negative rate). In another word, more members of these target groups received dental services classified under positive rate in 2011 with respect to 2010 and less persons of the same target groups received dental services categorized under negative rate in 2011 in comparison to that of 2010.

One explanation about this increase and decrease in beneficial rates of dental services is that due to the increase in providing restorations and fissure sealant therapies in 2011 in comparison to 2010, less extraction of teeth were done in 2011. The same conclusion goes for radiography from pregnant women. Namely, due to the better understanding of following the rule of not to take unnecessary radiography for pregnant women in 2011, so less radiography has been taken from pregnant women in 2011 in comparison to 2010 thus, this rate has also shown a negative rate in 2011.

The results of this study has also shown that the beneficial rate of target groups from dental services was 16.41% in 2010 and 20% in 2011. Being so, another conclusion obtained from this research is that the beneficial rate of target groups from dental services in general, is higher in 2011 with respect to 2010. This shows that this rate for these target groups in comparison to the total number of population referring to these centers is higher in 2011 than that of 2010.

Discussion

One of the best ways to evaluate the efficacy of health care activity programs is to measure suggested World Health Organization criteria in those programs⁽⁸⁾.

Comparing the mean of DMFT of permanent teeth in urban and rural children between six to twelve years old in Southern Provinces of Iran in 1998 and 2003 showed no significant difference^(9,10). Based on this study, from the total score of 1.86 for DMFT in twelve years old children, the score related to decayed teeth (D), missed teeth (M) and filled teeth (F) was 1.62, 0.07 and 0.17 respectively.

This survey also showed that 30% of twelve years old children had gingivitis. There was no difference between urban and rural children and boys and girls. Lack of change in these criteria in spite of integration program of oral and dental health care in PHC since 1995 in Iran and operating oral and dental health care program in preliminary schools and kindergardens since 1998, shows that these programs had not been successful in Iran and also in southern provinces. This was the main reason that preventive centers from dental diseases for children under twelve years old were established since 2000 in the whole country and southern provinces too. In these preventive centers, preventive measures such as fissure sealant therapy, restorations and fluoride therapy will be provided for these children. Kowash et al. in 2006⁽¹¹⁾ Weintrub et al. in 2001⁽¹²⁾ and Caufield, Beauchamp in 2007⁽¹³⁾ concluded that if fissure sealant therapy is integrated in dental services given to elementary schools, this process would be cost-effective.

Increasing the quality of health is an important socio-economic issue. Any programming for delivery of health care services must be a part of a comprehensive designed health program and thus comprises a portion of health progression plan. In developing countries due to the lack of enough background, information and skill in designing a high quality health care program financial resources will be usually allocated inappropriately⁽¹⁴⁾.

As an example, different researches around the world regarding different methods for prevention of caries indicate that correct application of these procedures will be cost – effective as far as economical situations are concerned^(15,16).

Comparing the results of two surveys in Iran in 2000 and 2005 shows that despite the presence of national oral and dental health programs, no significant change in oral and dental health criteria was seen^(17,18). The reason for this may be the fact that there are several factors influencing the beneficial rate from health care services. Rapidly increasing fees for health services, introduction of expensive modern diagnostic and therapeutic facilities, excessive and inappropriate use of these equipments, unsuccessful health delivery system, relatively insufficient oral health budget, lack of necessary motive in physicians to provide health care services, lack of enough awareness of people about importance of receiving oral health services, lack of sufficient education in health care personnel about preventive measures in oral field, and relatively in sufficient facilities needed for necessary treatments, are among these factors^(19,20,21).

In Iran, and subsequently in Southern Provinces, of Iran, due to the high expenses of dental services, school students will be visited in governmental oral health care centers and due to the importance of keeping permanent teeth, these students with the priority for restoration or fissure sealant therapy of these teeth, will be referred to these preventive oral health care centers in these centers, dental services will be provided with much less

expenses. This referral has caused school students of six to twelve years old, as target groups, to have a better access to these centers. Thus, these students have got more dental services each new year with respect to the previous year. That is why target groups of this study have also received more dental services in 2011 in comparison to 2010 accordingly.

To the best of our knowledge, no similar research regarding evaluation of beneficial rate of these target groups from dental services has been done in Iran up to the present time. So, the main purpose of this manuscript is to evaluate and compare the beneficial rate of above mentioned name target groups from dental services in Southern Provinces of Iran in 2011 with respect to that of 2010. Knowing kind of dental services is necessary to evaluate the beneficial rate.

Conclusion

Results of this article indicate that despite of the presence of positive beneficial rate in some of dental services such as restorations and fissure sealant therapy in 2011 with respect to 2010, expected beneficial rate from dental services in general, is low in target groups. Being so, it seems that making necessary arrangements to provide better and a higher quality oral health care services for target groups of Southern Provinces of Iran is a necessity.

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