

# Introducing Innovative Preventive-Based Dentistry Software in a Governmental Health System



TUMS

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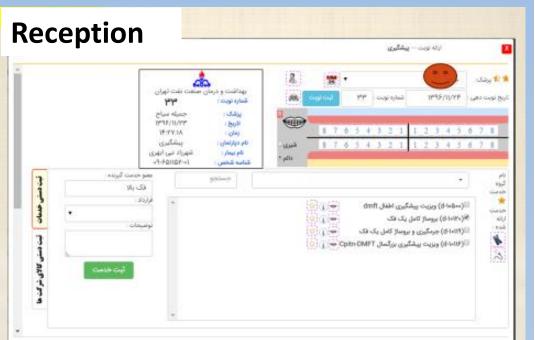
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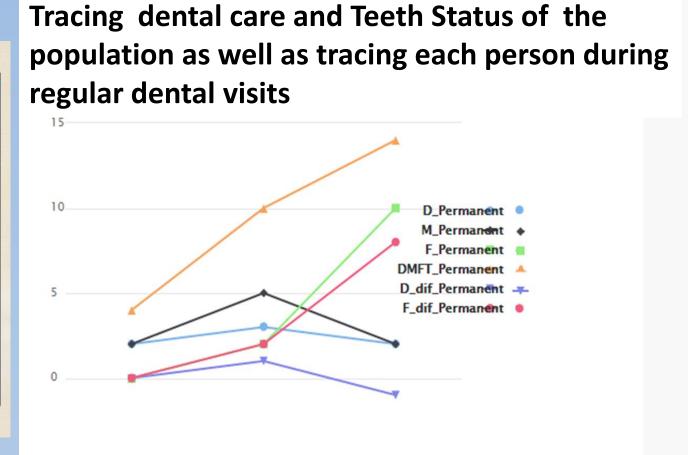
## **Objectives:**

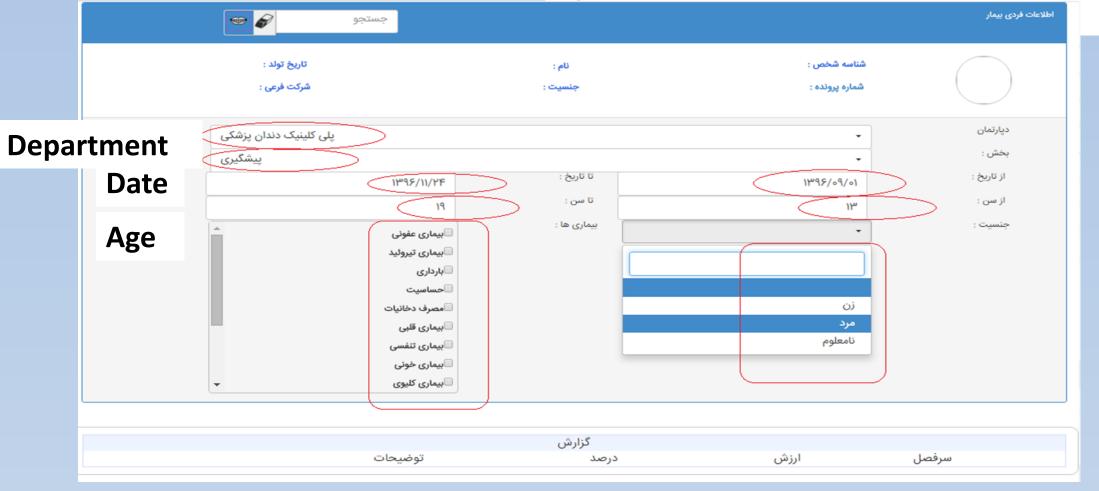
Regular dental service utilization can assist in early detection of dental problems and oral disorders of the population. To prevent diseases and save resources in government-supported public health systems, the logical solution is to accurately record patient health information and track their health over the time. The aim of this study was to develop a comprehensive software in the field of dentistry focusing mainly on prevention of oral and dental diseases.

## **Methods:**

- First, a paper file was designed to record the oral health status of patients using WHO indices. It was completed handwritten during two years for each volunteer patient referring to Tehran Specialized Oil Company Polyclinics and the data were entered to EXCEL software and analyzed by SPSS software.
- After removing the unnecessary fields, the data was transferred from EXCEL to ACCESS software to be structured and used as information. Finally, the software design team developed a web-based preventive dental software program in 2017 and applied it as pilot for one year in one of 13 clinics of National Iranian Oil Company in Tehran.



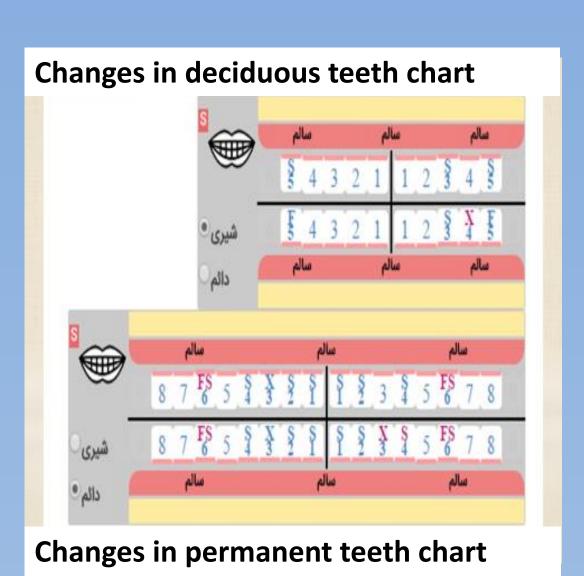


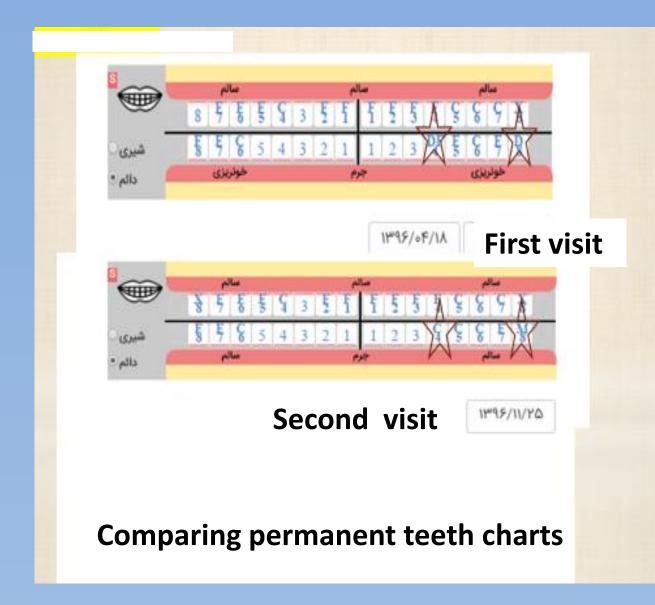


Reports applicable with filters of Age, Date of visit, Department type, and name of clinics

## **Results:**

- In this software individual, therapeutic and prophylactic data of all teeth of each person is recorded and standardized with the possibility to retrieve information and track oral health status individually.
- Reports in desired time intervals, generally based on age groups, date of visit, department type, and name of clinics are available.
- It is possible to send SMS messages within a period of six months as recall.
- The incidence and arresting of dental caries in population during the specified time period can be tracked by inferring dental and gingival indices changes.





### **Conclusion:**

The development of this preventive software enables managing information and patient tracking at desired time periods, and provides useful reports for informing patients about their oral health status and increases managers' awareness of the condition of health service delivery and relating results.

#### **References:**

- 1. Wagner IV, Lex MacNeil MA, Esteves A, MacEntee MI. An electronic oral health record to document, plan and educate. Eur J Dent Educ. 2015;19:209–16
- 2. Chattopadhyay A, Coelho de Souza T, Arevalo O. Electronic oral health records in practice and research. In: Daskalaki A, editor. Dental Computing and Applications: Advanced Techniques for Clinical Dentistry. New York, USA: Medical Information Science Reference; 2009. pp. 209–12.

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