

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

Hoda Bahramian <sup>1 \*</sup>, Ali Behzadi <sup>2</sup>, Fereshteh Jahani <sup>3</sup>, Amirhooshang Daghayeghi<sup>3</sup>, Hossein Khoddami <sup>4</sup>, Salimeh Khayami<sup>4</sup>, Ali Baghalian <sup>5</sup>

1 Community Oral Health specialist, Tehran University of Medical Sciences

2 Physician, National Iranian Oil Company

3 Endodontist, National Iranian Oil Company

4 Software Engineer, Islamic Azad University, North Tehran Branch

5. Pediatric dentist, Tehran University of Medical Sciences

**Objectives:** One of applicable ways to prevent diseases and save resources in state-supported public health systems 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. Then the unnecessary fields were removed and 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.

**Results:** In the newest version of software, individual and therapeutic and prophylactic data of all teeth of each individual is recorded and standardized with the possibility to retrieve information and track oral health status individually and report in desired time intervals and generally based on age groups. Among the features of this software; it is possible to send SMS messages within a period of 6 months as recall, to provide a report on the occurrence or stopping of dental caries in population during the specified time period, and to report dental and gingival indices changes, etc.

**Conclusion:** The development of this preventive software enables information management 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.

**Keywords:** Oral health, Prevention, Dentistry, Software, Health Services, Dental Caries