



DDM – Multidisciplinary dental documentation – A New method to provide treatment planning, describing all specialties, sequences of treatment and time dispending for all phases of treatment

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Abstract:

Several innovative techniques are beginning to be used in the academic area, specifically in the biological sciences such as Medicine and Dentistry. In the area of Dentistry, the digitization of images and new hardware and software are able to greatly improve the execution of jobs, but there is now a growing demand for more accurate diagnoses and treatments that reduce unpredictability and retreatment, improving the efficiency of clinics and hospitals. better conducting the treatments done by Dentists. Thinking about it, the HOC - Hospital Odontologico CETAO team linked to the Higher Education Institution CETAO, developed a new exam called DDM - Multidisciplinary Dental Documentation that, through some digital data and some reference measures, can reach a more accurate diagnosis, which should be guaranteed a correct treatment plan, which is the only way to restore the patient's health. As the diagnosis is multifactorial, it is subject to a great risk of error. Therefore, the standardization and creation of an algorithm with the introduction of multiparametric pattern recognition methods (statistics, machine learning and artificial intelligence (AI)) is a great hope for Dentists and Patients. The System has been in use for a year and a half and the data comes from the patient base already served in 22 years of multidisciplinary care that made it possible to create a standard for conducting treatments. The System works as a support as a support for clinical decision, where treatment has a beginning, middle and end. As if it were a path to be traveled between the starting point A (current state of the patient) and the final point B (finished treatment) respecting the personal variables of each patient. The exam



is generating an algorithm that will be used to scale larger amounts of diagnoses, in addition to being able to adapt to some regional realities. Implementation is slow initially as it requires changes in habits and standards in dental clinics. The HOC serves an average of 90 patients per day using this method. The work is continuing as well as the changes but the results are very encouraging.

Biography:

Alenio Calil Mathias graduated in Dentistry from the University of Sao Paulo (1987), Master in Dentistry (Dental Prosthesis) from the University of Sao Paulo (1996) and PhD in Dentistry (Dental Prosthesis) from the University of Sao Paulo (2001). He has experience in Dentistry, with emphasis on Prosthesis and Implant, acting on the following subjects: fixed prosthesis, implant, TMJ, and oral rehabilitation. He has worked since 1987 in private practice and since 1998 as a director of a Higher Education Institution, working in the areas of Teaching and Research. Currently developing a new model of multidisciplinary treatment at HOC- Hospital Odontologico Cetao as a Clinical Director. Besides acting in the area of research and development of diagnosis and planning of oral treatments with the aid of artificial intelligence.

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