

MODERN EQUIPMENT OF THE DENTAL ROOM

Qobilova Nargiza

Bukhara University of innovative education and medicine

Annotation: Big data deep learning and high-performance computing are pushing society into the era of data intelligence. The emergence of artificial intelligence and the development of the sharing economy have brought about a radical change in the traditional way of life in the past. The concept of “smart+” has also become more and more popular. The improvement of living standards has caused more and more serious dental problems. The pressure on dental hospitals has increased, and the upgrading of dental chairs is imminent. The purpose of this article is to analyze the application of technology in modern dental equipment for analysis and research, so as to expand its future development prospects.

Keywords: Modern equipment, dental, equipment, modern dental.

Introduction

Modern working conditions and maintaining a competitive level in the market of dental services requires a new approach and updated equipment in the practice. The changed socio-economic conditions require maximum attention to every detail of the accoutreatments, the design, the appearance of the practice. It is very difficult to make a review of the dental equipment, because of the lack of scientific publication in professional journals. A new equipment, in competitive market is one of the most important factors for improving and expanding the dental services of a practice. Of course, the specific needs and functions of a practice will determine the type of the equipment.

Financial projects for new equipment, new opportunities and associated risks are important. A new challenge is the dilemma of buying or renting an office - how profitable it is to own your own commercial space. It is important decision for the dentist, because on this base he/she will buy the equipment. The decision to buy a dental practice is the most important one in a young, dentists professional career. It should be made only after a careful examination and review of the seller's practice. Significant knowledge of ergonomics and its practical application is vital for the prevention of musculoskeletal disorders. The role of ergonomics in equipment to prevent those work-related diseases is worthy of attention.

To analyze the importance of updating the equipment for the competitiveness of dental practice in the market conditions.

- To establish the age of the machinery and its renewal
- To establish work with foreign dental units and dental units produced in Bulgaria.
- To identify the usage of additional equipment in the dental practices.

MATERIALS AND METHODS

The survey was conducted in the form of a direct anonymous survey as of 2011-2013. A representative sample of the dentists registered with the 28 regional regional offices of the Bulgarian Dental Association was included. The actual study was preceded by a pilot study. Data were collected as follows: for the pilot study September-December 2011; for the real one - in the period January 2012 - September 2013. The data were processed with specialized statistical software SPSS Statistics 20.0 (IBM Corp., Armonk, New York, USA)16.0 for Windows. The result data was grouped in: "distribution by territory", "gender", "age groups", "work experience", "ownership of practices", "contracts concluded with NHIF", "specialty", "mode of practice", "with support staff". These are independent variables. Dependent variables: "equipment", "apparatus", "mode of practice", "form of labor legal relations with other DDMs", "additionally support staff training". Completing the the survey card was done directly by the respondents. Indicators for studying the dynamics of the socioprofessional status were done by dental demographics, qualification, mode of practice. The development of the dental practice - through the ownership of the equipment, development of the team, number of specialists and improvement of the dental care offered. Market development – through various forms of financing. Sample and questionnaire.

RESULTS

One thousand and nine hundred questionnaires were distributed, proportionally in all districts of the country. The participants were members of BgDA. They fill in the questionnaire at the postgraduate seminars, organized by Regional Offices of Bulgarian Dental Association. One thousand and three hundred thirty, one of the questionnaires were correctly completed and returned. This is 16.15% of the total number of DDM (2011), with 95% confidence interval (15.40% ÷ 17.00%), with a response rate of 70.10%. The available dental units were divided into two groups. The continuous improvements of the dental technology are leading to development of the market. Parallel to that, modernization of the dental equipment is observed. At the moment, the use of Bulgarian units is still prevailing. In order to specify, without defining the brands, the used equipment is conditionally included in two groups. Each group is divided into two subgroups. The first group is including machines placed in cervice before 1990, and subgroups - before and after 1980. The second group includes machines purchased and installed in offices from 1991 to 2011. In this group the subgroups are: 1991-2000 and after 2001.

Most of the offices show tendency to be supplied with more modern equipment (823 machines purchased after 1991, compared to 214 purchased before 1990). This is an indicator that would lead to more rational, efficient and modern dental care for patients. The data show that the modernization of the equipment is going at an uneven pace for the individual groups. The largest number of units made between 1991 and 2000 are purchased from dentists with age 41 and plus years old, while those made after 2000 are purchased from the dentists with age until 40. A statistically significant relationship is established between the renewal of the units and the age group of the dentists who have worked in those dental practices. Sixty-one (72.62%) of the doctors in the first age group and 126 in the second group (68.48%) work with units purchased after 2000. This is related to the desire to improve the quality of dental care among young colleagues and at the same time only 28.43% (29 doctors) of over 60 years old renew their machinery with units after 2000. The trend is reversed with the old machinery: with machines made before 1980 work 1.19% of DDM from the age group under 30 and 15.69% of those over 60.

DISCUSSION AND CONCLUSION

The trend of technological innovation, staffing and development of the dental team is also confirmed by other studies of foreign authors. Two hundred twenty nine of answers or 22.66% have new dental units, 4.79% (59 DDM) have new X-ray devices, and 54.51% (671) have purchased new other equipment. The number of practices relying on computerized data processing and electronic data exchange is increasing. 671 (56.21%) work with new computers. Such a trend is also observed in other European countries (M. Nasser). If in 1996 8.6% of dentists had a computer, then according to the current study (2011), only in the last three years 56.21% have bought new computers. The renewal of equipment for the purpose of competitiveness and good dental practice is also proven by the data that in 1996 24.00% were working with units up to 10 years old, while in 2011, 50.92% of machines with the same age were working. The equipment is also the basis for improving productivity, especially in the conditions of market-economic relations. Its renewal and improvement are part of the world's technological progress in every era. On the Bulgarian market there is a gradual renewal of machinery most of which is imported equipment. With the increasing use of social networks and computer technology, it leads to an increasing saturation of dental practices with computers of the latest generation. At the same time, communication between doctors and patients is improving, as well as between doctors themselves and them and commercial companies and other institutions. This determines at the same time the standard of good dental practice. It is important to take into account the differences between the modern market and the previous - planning environment. With the change of the role of DDM, from employed by the state on a salary to being the responsible and interested in the development of his practice. In the condition of planned economy, complex and expensive equipment is purchased and maintained by the state. The government has also been paying for other consumables - electricity, water, heating, materials. And in these conditions, a better equipped office together with a more qualified doctor lead to a better quality of treatment. However, in those conditions the possibility of a discrepancy between the limited state resources and the initiative of the doctor is great. We have a contradiction between what the dental specialist wants as equipment and what the state provides. In the conditions of 100% private practice, modernization depends on the financial capabilities of the doctor himself. From his initiative and entrepreneurship. Of course, here again we can see a discrepancy between what he wants and the possibilities for providing it. The costs in this case are solely at the expense of the practitioner. Therefore, the existence and development of dental practice depends primarily on profit, or income and expenditure balance. The private practitioner is required to know the legal requirements in the field of funding. Seema Sharma states that for good modern dental practice, "business acumen is as important as clinical experience." According to her, dental practice has two goals: to provide excellent patient care and to generate income for the people who work in it. For the owner of the practice there is an additional goal: to invest in the sustainable development of the business, which may be sold at some point in the future. Modern dental practice needs:

- Increase in its capacity and production at all times to maintain and raising revenue;
- Reducing possible losses and maintaining and increasing profits;
- The dentist as a team leader to have an active approach to continuous training and improvement of their own and the staff's skills.

REFERENCES

1. Catalano David, Financial pitfalls of expansion projects (and how to avoid them), Today's FDA, PMID: 16683512, Nov-Dec 2011;23(7):40-1,43.
2. Almonte Peter, So you want to buy a dental practice, N Y State Dent J, PMID: 12018139. 2002;68(4):20-3).
3. Rajeswari S Raja 1, Triveni M Gowda 1, Tarun Ab Kumar 1, Kanchan Arya 1, Dhoom Singh Mehta 1, Assessment of interns and postgraduate dental student's knowledge regarding Equipment Ergonomics. DOI: 10.4103/0970-9290.186246
4. Katrova L. The dental profession, state and prospects, book, 1998, ISBN 954-90363-1- 6, 290 Originally: Катрова Л. Стоматологичната професия, състояние и перспективи, книга, 1998, ISBN 954- 90363-1-6, 290
5. Young J M, New dental products and equipment, Curr Opin Dent. 1991 Oct; PMID: 1807469, 1(5):677-84 [02.02.23, 1:06].
6. Floyd M, Dental operatory design and equipment, Semin Vet Med Surg Small Anim, PMID: 8210795, 1993 Aug;8(3):129- 37[02.02.23, 1:06].