

# THE IMPACT OF IMPLEMENTATION OF THE QUALITY MANAGEMENT SYSTEM ON EFFICIENCY AND EFFECTIVENESS OF SELECTED DENTAL CLINICS

**The aim of the study** is to create, implement and evaluate the impact of the proprietary quality management system on the efficiency and effectiveness of dental clinics.

**Research hypothesis:** The implementation of own original quality management system in dental clinics contributes to the improvement of the efficiency and effectiveness of the managed practice.

## Research methodology

The first stage of the study was to develop a quality management system based on:

1. analysis of previous Polish and foreign experience in quality management in dental clinics
2. evaluation of the correctness of the proposed quality management statements and procedures and their adaptation to the needs of dental clinics in Poland by competent judges.

The proprietary quality management system is a holistic tool that will improve all elements of a dental clinic's work.

The next stage of the study was to select a number of dental surgeries in the Łódzkie Voivodship and obtain their consent to participate in the study. The surgeries qualified for the survey will be divided into two groups: 1. clinics in which a proprietary quality management system will be implemented (research group),

2. clinics in which no quality management system will be implemented (control group).

The effectiveness of the implemented quality management system was measured one year after the introduction of the abovementioned system by comparing selected quality measures before and after the introduction of the author's system. Performing the analysis in the control group allowed us to eliminate differences in the monitored quality measures caused by changes in the dental services market during the analyzed period. To collect empirical material, 3 original questionnaires dedicated to managers/owners of dental clinics, employees and patients were used. Selected economic, social and purposeful measures were also examined. Among the economic measures analysed were productivity rate, profitability and profitability. Quality measures such as non-conformities, defects and work stoppages, losses due to internal and external defects, repairable and non-repairable, as well as defective and delayed deliveries will be analytically assessed. In the social part of the activities, the level of employee adaptation to change and the level of purposefulness are analysed, as well as measures to determine the degree to which the objective resulting from the strategy is being met. The collected empirical material was subjected to statistical analysis using Statistica.

In addition, as part of the audits carried out at the clinics, information was collected on the cost efficiency of the clinics, the ease of implementing the proposed changes and the management of the facilities. This will allow the creation of a holistic practice management tool.

At the design stage of the study, the expected findings will answer the questions of whether a quality management system in dental practices is perceived as necessary and whether it significantly improves the effectiveness and efficiency of dental practices.

## Schedule of works carried out:

1. the work included a literature review, development of research methodology, preparation of a preliminary draft quality management program, creation of research tools for office staff and owners
2. invitation to cooperation of owners and managers of offices, implementation of research tools in institutions for the staff of offices and owners, supervision and environmental data collection in selected dental clinics, work on the publication of other research
3. collecting and analyzing data, preparing and processing data and conclusions, and preparing publications, implementation of the prepared procedures
4. verification of conclusions and results as well as the final data processing and preparation of the doctoral dissertation in its final form.

50/50

## Results of phase II of a survey of patients, employees and owners and managers in dental practices

### Study group

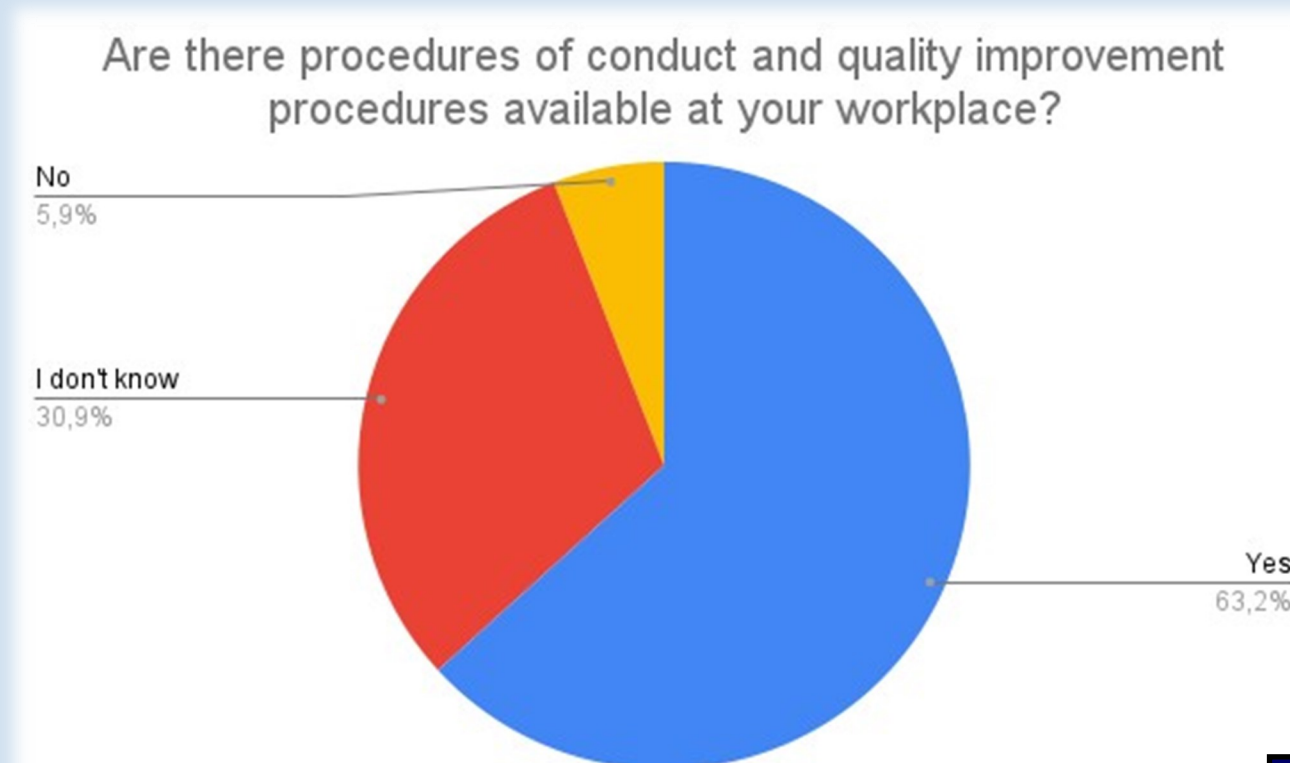
Patients: 612

Employees of dental clinics: 68

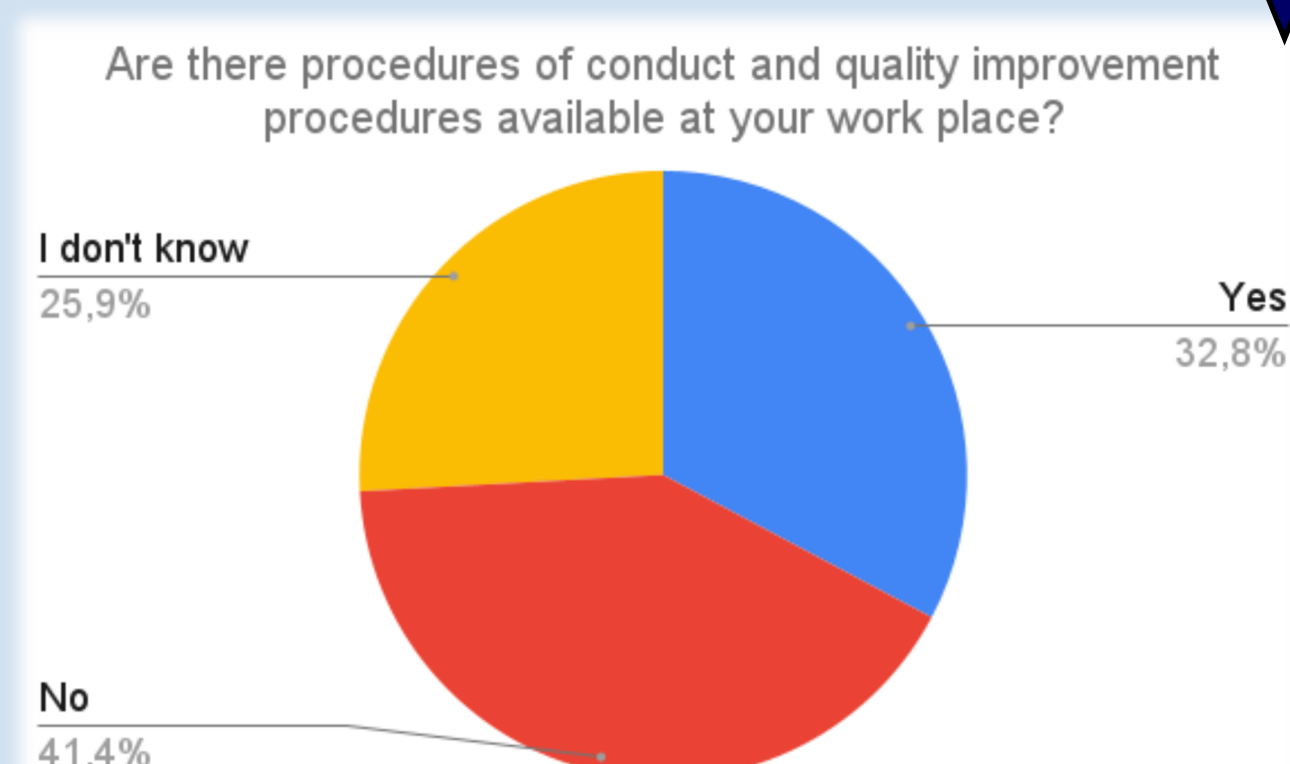
Owners/managers: 12

Total: 692

### Employee responses



Answer from initial entry survey

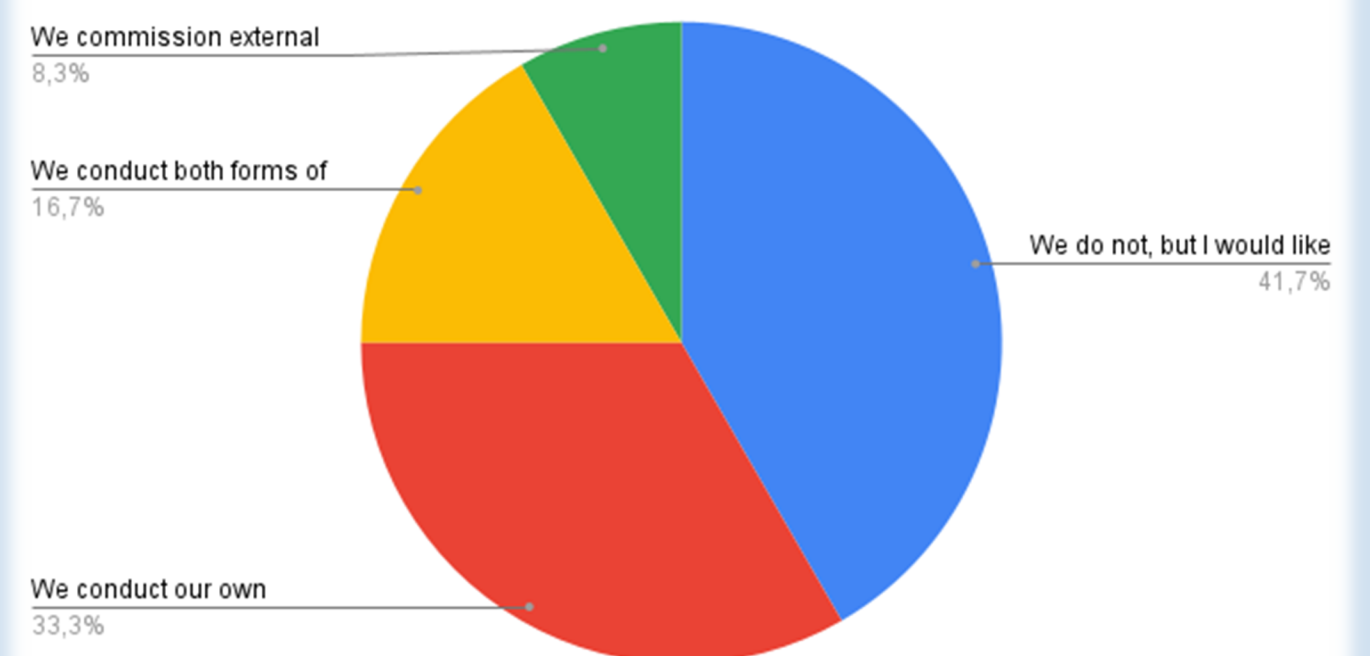


One of many examples of how the responses of practice staff have changed since the previous phase of the survey and the introduction of procedures for conduct and quality improvement in the workplace.

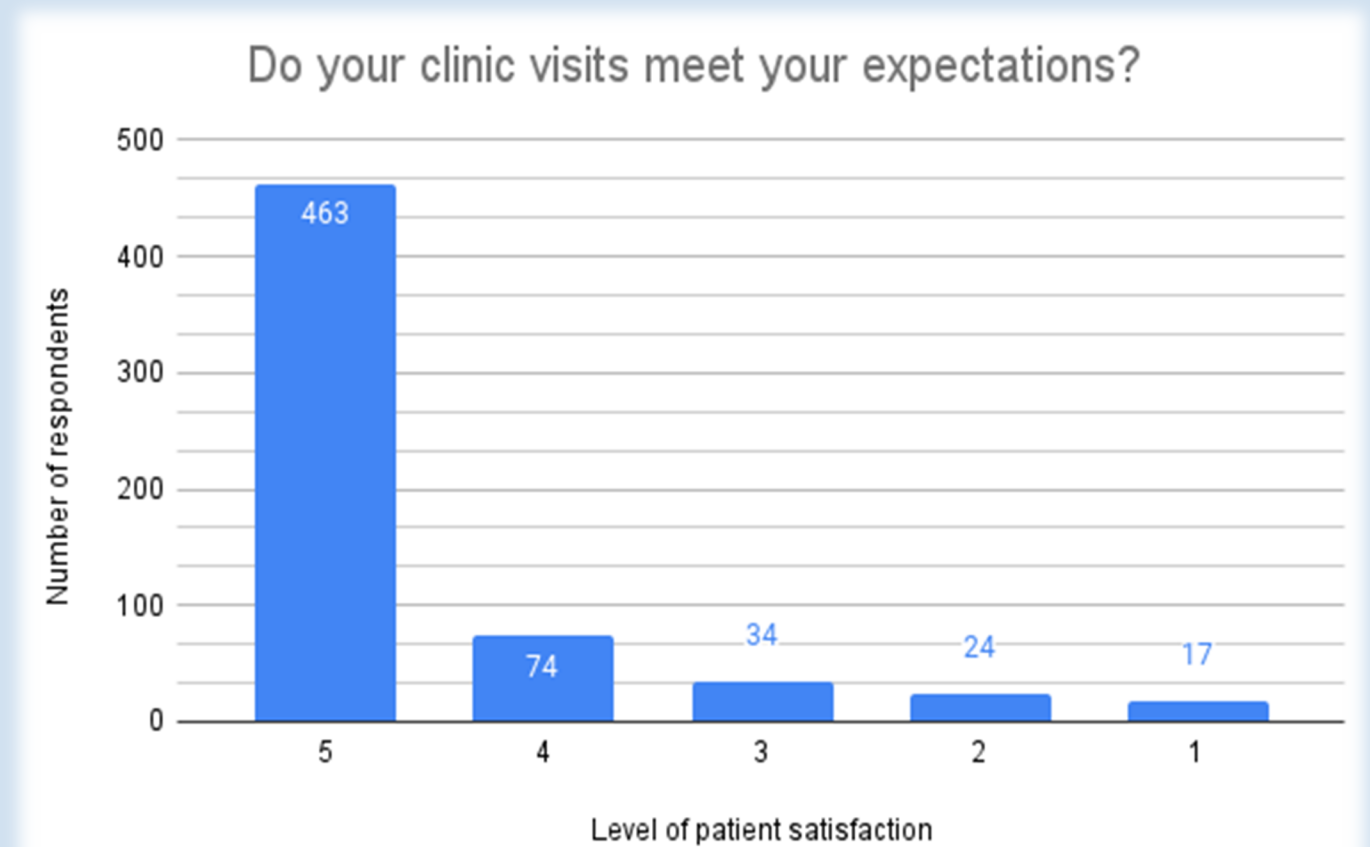


### Owners/managers responses

Does your practice conduct its own patient opinion/satisfaction survey or use external surveys for this purpose?



### Patients' responses



## Conclusions

The results presented clearly confirm the need to create and implement uniform dental procedures. Among the questions to employees and owners was a list of the most-needed procedures they would use in their practices. On the basis of this, a list of procedures was created, covering issues such as working with difficult patients, keeping medical records, disinfection and decontamination, handling and breakdown of equipment, placing orders as well as dealing with patient complaints to various authorities. This will reduce staff stress, wastage of materials and increase safety for both patients and staff. Patients were again asked about their overall satisfaction with their visits to the facilities.

The final stage is to compare the collected data, analyse them and formulate conclusions in the form of a dissertation.

Publications;

Natalia Skorzycka, Agata Kunert, Dominika Cichońska-Rzeźnicka, Jan Krakowiak—Analysis of the intervention of emergency medical teams in Lodz in 2020, Journal of Health Study and Medicine 2023