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Short Communication

To study the communication hindrance between laboratory technicians and dentist of work authorization for FPD- A survey

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ABSTRACT

Aim: Aim of this survey was to determine the communication the level of communication between dentists and dental laboratories in specific areas of the work authorization forms for the fabrication of fixed partial dentures.

Setting and Design: A questionnaire was prepared to assess communication gap between dentist and lab technicians through work authorization for FDPs.

Materials and Methods: A total of 70 dental laboratory technicians were provided with a questionnaire regarding work authorization form via Google doc files. The survey focused questions pertaining to fulfilling the following areas of work authorization: patient's information, name of the prescribing dentist, material for the prosthesis, pontic design of the prosthesis, shade description, and date of completion of work.

Statistical Analysis used: The number of responses received was statistically evaluated using Fisher's t-test and nonparametric Spearman's correlation coefficient ($P \leq 0.05$).

Results: Eighty out of 100 laboratory technicians surveyed responded to the questionnaire.

The patient's general information was satisfactorily filled in 75%–100% of the forms. Information regarding the pontic design, staining diagram, and preferred margin were on the lower side of the scale ranging between 25% and 50%.

Conclusions: The survey concluded that areas of work authorization with respect to fixed dental prosthesis require attention and need to be adequately filled by the dentist. In addition, the study suggests that the foundation of communication skill training programs in work authorization should be laid from the undergraduate curriculum. The concerned authorized bodies/specialty organizations should formulate a standardized work authorization format which can bridge the wide gap between the crown and bridge office and laboratory.

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1. Introduction

A successful prosthodontic treatment involves a clinically acceptable prosthesis. Proper communication between the dentist and the dental technician leads to a well-designed prosthesis, a satisfied dentist, and a comfortable professional

working relationship between the dentist and the dental laboratory technician.¹

Prosthodontics is a branch which requires inter-relation of dentist-technician-patients. Communication gaps affect in total all the three bodies. The most effective way of communication is by means of work authorization form. The purpose of well-completed work authorization form is to achieve and provide a unique, distinctive prosthesis for

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each individual patient.²

Literature revealed trends of poor communication in terms of inadequacy of information provided, which is not new to dentistry.^{3,4} A 1991 survey of dental laboratories identified consistent complaints from dental technicians of inadequacies in the quality of clinical products they received, as well as insufficient information on the work authorization.⁵ In 1990, Goodacre offered specific recommendations for dental educators to address the ramifications and responsibilities of future dental practitioners with regard to the dental laboratory.⁶ In 1994, a program was developed to improve the quality of laboratory submissions and the returned product, facilitating laboratory communication.⁷

The purpose of this survey was to evaluate the communication between dentists and laboratory technicians through work authorizations for the fabrication of fixed partial dentures (FPDs) by looking at specific areas of these forms received by the technicians.

2. Materials and Methods

A questionnaire covering specific areas of work authorization forms was used for the survey. The questionnaire was a Google doc file consisting of 9 rating types of questions in English language. The title of the document explained the purpose of the study.

Specific areas of the work authorization concerned with fabrication of fixed dental prosthesis were covered in the survey. The questionnaire included questions to be answered in percentages for indication in work authorizations received by the laboratory for the following: patient's general information, referring dentist's name and signature, selected shade, material of the prosthesis, preferred margin design, design of pontic, diagrammatic representation for shade, are the forms printed in regional language, date of completion, mentions need of try-in, and additional photographs provided.

The distribution of the Google form was facilitated through the Association of Dental Technicians of Maharashtra to all licensed dental laboratory technicians (n = 100) using a random sampling technique, with a 2-month deadline for answers. The questionnaire asked for anonymous responses to ensure confidentiality and overcome possible reservations about participation. One month after the first mailing, a reminder was issued by the Association of Dental

Technicians to all member laboratories restating the request for a reply. A total of 100 dental technicians received the mailed questionnaire, out of which 80 responses were received at the end of the survey.

Questionnaire that was asked to technicians

1. Indicate the patient's age and gender?

- (a) Less than 25% (b) 25% to 50%

- (b) 51% to 75% (d) 76% to 100%

2. Indicates general information of dentis

- (a) Less than 25% (b) 25% to 50%
- (b) 51% to 75% (d) 76% to 100%

3. Indicate the return date? Responses (%)

- (a) Less than 25% (b) 25% to 50%
- (b) 51% to 75% (d) 76% to 100%

4. Indicate the specific type of prosthesis (i.e., Porcelain Fused to Metal Crown, All Ceramic Crown, Telescopic Coping, Full Metal Crown etc.)?

- (a) Less than 25% (b) 25% to 50%
- (b) 51% to 75% (d) 76% to 100%

5. Mentions the required (chamfer/shoulder margin design for prosthesis?

- (a) Less than 25% (b) 25% to 50%
- (b) 51% to 75% (d) 76% to 100%

6. Indicate the type of pontic design?

- (a) Less than 25%
- (b) 25% to 50%
- (c) 51% to 75%
- (d) 76% to 100%

7. Indicate the shade of the fixed restoration?

- (a) Less than 25%
- (b) 25% to 50%
- (c) 51% to 75%
- (d) 76% to 100%

8. Indicate the type of porcelain?

- (a) Less than 25%
- (b) 25% to 50%
- (c) 51% to 75%
- (d) 76% to 100%

9. Mentions the need for try-in before fabrication of final prosthesis

- (a) Less than 25%
- (b) 25% to 50%
- (c) 51% to 75%
- (d) 76% to 100%

10. Indicate the type of porcelain glaze?

- (a) Less than 25%
- (b) 25% to 50%
- (c) 51% to 75%
- (d) 76% to 100%

3. Results

For each question, the number of responding laboratories was tabulated and converted into percentages. The results are presented in Figures 1, 2 and 3.

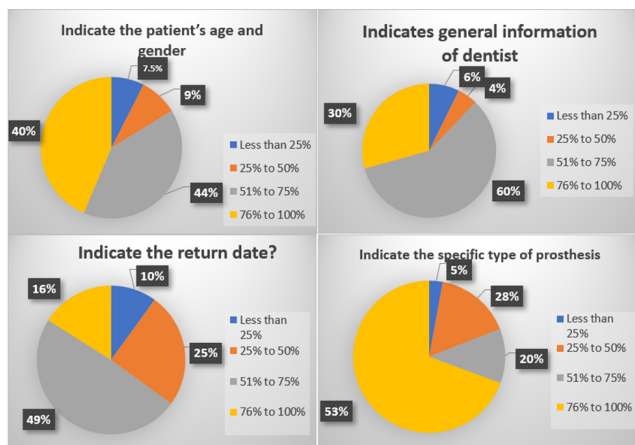


Figure 1:

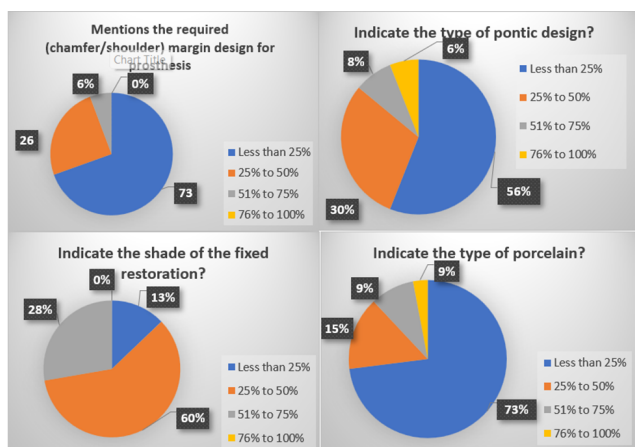


Figure 2:

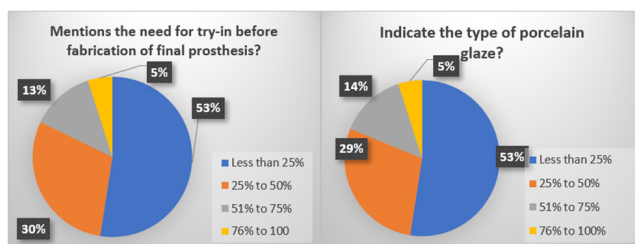


Figure 3:

4. Discussion

Laboratory work authorizations have been called the most frequently used and abused form of communication between the dentist and the laboratory technician.⁸

Technicians' dissatisfaction by the information provided by the dentists has been reported in a survey done on fixed prosthodontics. A survey of dental laboratories in 1991 mentioned frequent complaints regarding incomplete information on work authorization by the technicians.⁹

From this survey, it is evident that <25% of the prescriptions received by the dental technicians were legible to render good service. Information about patient and gender and date of completion of prosthesis was reported 50-75%. Information regarding referring dentist, patient's general information, and date for completion of prosthesis was reported 51%–75% of the times. Forty nine (49%) of respondents reported that the return date on the prescription was indicated between 51% to 70% of the time.

The majority of laboratories (53%) responded that 75% to 100% of the dentists had indicated the type of prosthesis they desired for the patient; however, nearly half the work authorizations received did not specify the metal alloy to be used for prosthesis fabrication. The choice of an alloy depends upon a variety of factors including cost, rigidity, castability, ease of finishing and polishing, corrosion resistance, compatibility with specific porcelains, and personal preference.⁹ Dentists have the legal and ethical responsibility for the selection of the alloys used.

About 73% of the work authorization form lacked information regarding the preferred margin design. Margin design configurations depend on various clinical situations. Hence, dentists should have knowledge of the same and be in a position to put forward the same to the laboratory technician to meet patients' esthetic and functional needs. These results are comparable to previous studies done on fixed prosthodontics.

Proper pontic design is important for cleansability, good tissue health, and good esthetics; fifty-six percent of the laboratory technicians stated that less than 25% mention the type of pontic design in their prescription. Although dental technicians are important and valuable members of the oral health provider team, they are not trained to diagnose or manage the patient.

Tooth shade information is essential to the dental technician. 60% of lab technician stated about 25% to 50% of dentists gave information about shade of the prosthesis. A staining diagram of a tooth that allows the specification of multiple shades is very helpful to the dental technician, especially in the fabrication of crowns in the anterior region. For example, by designating a cervical shade, an incisal shade allows for proper individual characterization of patients' teeth.

Even though more than half of technicians indicated type of prosthesis technicians did not stated less than 25% dentists indicate type of porcelain. Fifty three percent of the laboratories reported that dentists usually did not indicate the type of porcelain glaze. This responsibility should not be delegated to the dental laboratory technician.

Recently, the American Dental Association (2011) has issued updated guidelines to improve the relationship between the dentist and the laboratory technician.¹⁰ These guidelines not only advance the communication between dentists and laboratory technicians but also the efficiency

and the quality of care for the patient.

Surveys considering knowledge of infection control amongst lab technicians concluded laboratory technicians lacked the knowledge of basic infection control protocol.¹¹ Only about half of the dentists communicated the desired information (contact relation, crown contour, margin and pontic design of the prostheses) to the dental laboratory technician even after taking the decision of repeating the prostheses.¹²

It is fundamental that the dentist and the laboratory technician should collaborate effectively as a team possessing a sound understanding of each other's roles with regard to prosthesis fabrication.¹³ Good communication between clinicians and dental technicians is vital if a good end result is to be achieved. This must continue to be taught and reinforced to undergraduate dentists.^{14,15}

5. Conclusions

1. Trends indicated large laboratories citing lack of communication by the dentists
2. Work authorization forms should contain specific informations as requested by the laboratory technicians
3. Inclusion of teaching programs on work authorization in undergraduate curriculum and implementation of standardized format by authorized body.

6. Source of Funding

None.


7. Conflict of Interest

None.

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