DOCUMENTATION AND COMUNICATION BETWEEN DENTAL OFFICES AND DENTAL LABORATORIES

ABSTRACT

This research was conducted to review the documentation and communication protocols used by dental offices and dental laboratories in the cities: Rio de Janeiro (RJ) and Araçatuba (SP), focusing on legal aspects of this practice, through a questionnaire with open and structured questions. The answers were subjected to statistical analysis with Chi-square and Fisher´s exact test, and showed that there is no agreement in the literature regarding documentation and communication protocols between the observed samples, as well as the perception of this practice by the interviewed, making evident the need to rethink the aspects that work through the relationship between dental offices and dental laboratories.

RONDON, Bruna Carolina Santos*
FERNANDES, Mário Marques**
TINOCO, Rachel Lima Ribeiro*
DARUGE JÚNIOR, Eduardo*

KEYWORDS

Legal dentistry. Dental records. Legislation.

Legal dentistry, Dental School, University of Sao Paulo, São Paulo, Brazil*
Department of Social Dentistry, Dental School, University of Sao Paulo, São Paulo, Brazil**
Correspondence: bru_rondon@hotmail.com (RONDON BCS)

| **Received** 16 Dec 2013 **Received in revised form** 19 Dec 2013 **Accepted** 22 Dec 2013

INTRODUCTION

Due to the desire and the need not to change the dimensions of the molds that will be used for dental work, biosafety measures are commonly neglected; in order to minimize this problem, is essential the good communication between the dentist (DDS) and dental technician (DT) in order that one knows the procedures performed by the other before sending the material, because when we think about impression materials, the infection risks exceed the doctor-patient axis and may also involve the dental technicians and their assistants.

Not only for biosafety issues that the documentation must be complete. In the relationship between DDS and patients there are situations that can result in legal conflicts. Therefore, the knowledge of the laws that guide professional practice and its implications in the dental office is a professional obligation, specially concerning the filed documentation as a source of proving material in a possible court deal; besides the fact that keeping complete records is a professional ethical duty, once it may be required for purposes of human identification.[1]

Thus, this study aimed to analyze the documentation and communication protocols used by dental office and dental laboratory in the cities of Rio de Janeiro (RJ) and Araçatuba (SP), focusing on legal aspects of this practice.

MATERIAL AND METHODS

After the project had been approved by the Ethics Committee of Piracicaba Dental School, FOP/UNICAMP, under protocol 025/2009, two kinds of questionnaires were sent to a sample composed by 200 professionals, including 100 dentists and 100 dental technician from the metropolitan region of Rio de Janeiro (RJ) and Araçatuba (SP). The questionnaires had questions related to the profession, as well as the Statute of the Odontology Council, and preserved the participants identity. The data were evaluated through the Chi-square and Fisher exact test.

RESULTS

A hundred and twenty two questionnaires were returned - 78 from dentists and 44 from dental technicians. On concerning the sample´s profile, 41,25% (n=33) of the DDS act as general practitioners, and the specialty with more experts (15%; n=12) was esthetic dentistry. With regard to age and gender it was possible to make Table 1, which shows male predominance (85,7%; n=60) on DT group.

When asked about orientation in biosafety during formation, 67,9% (n=53) of the DDS and 76,2% (n=32) of the DTs had the theme in their studies. Also, 89,7% (n=70) DDS and 83,3% (n=35) of the DTs usually read academic magazines and journals; and when

asked about participation in conferences, 62,8% (n=49) of DDS go to courses once a semester, as can be seen in Table 2.

Table 1 – Sample´s profile regarding age and sex.

Variable	Category	Group				Total		p
		Dentists (n=78)		Dental technicians (n=42)				
		n	%	N	%	N	%	
Sex	Male	24	30.8	36	85.7	60	50.0	0,000[1]**
	Female	54	69.2	6	14.3	60	50.0	
Age	20 a 30	31	39.7	10	23.8	41	34.2	0.257[1] ns
	31 a 40	13	16.7	6	14.3	19	15.8	
	41 a 50	15	19.2	13	31.0	28	23.3	
	51 a 60	10	12.8	10	23.8	20	16.7	
	61 or more	8	10.3	3	7.1	11	9.2	
	Don´t answer	1	1.3	-	-	1	0.8	

ns = not significative; [1] Qui-square Test; [2]Fisher´s Exact Test** significative p≤0.01; * significative p≤0.05.

Table 2 – Participation in conferences.

Frequency	Group				Total		p
	Dentists (n=78)		Dental technicians (n=42)				
	n	%	n	%	n	%	
Once every 2 years	1	1.3	3	7.1	4	3.3	0.001[2]**
Once a year	13	16.7	16	38.1	29	24.2	
Once a semester	49	62.8	11	26.2	60	50.0	
Sporadically	14	17.9	11	26.2	25	20.8	
No answer	1	1.3	1	2.4	2	1.7	

Fisher´s Exact Test** significative p≤0.01.

Table 3 – Packing of the material to be sent to the dental laboratories.

Package	Group				Total		p
	Dentists (n=78)		Dental technicians (n=42)				
	n	%	N	%	n	%	
Lab box	19	24.4	31	75.6	50	42.0	0.000[1]**
Plastic or acrylic pack	17	21.8	35	85.4	52	43.7	0.000[1]**
Paper ou cardboard pack	6	7.7	39	95.1	45	37.8	0.000[1]**
Laboratory plastic pack	19	24.4	25	61.0	44	37.0	0.000[1]**
Another plastic pack	26	33.3	36	85.7	62	51.7	0.000[1]**
Paper napkin	7	9.0	30	71.4	37	30.8	0.000[1]**
Bond paper	1	1.3	5	12.2	6	5.0	0.018[2] *
Unpackage	3	3.8	21	51.2	24	20.2	0.000[1]**

[1] Chi-square Test; [2]Fisher´s Exact Test** significative p≤0.01; * significative p≤0.05.

Table 4 – Communication between dental offices and dental laboratories.

	Group						
	Dentists (n=78)		Dental technicians (n=42)		Total		
Communication	n	%	n	%	n	%	p
Written on lab paper	55	87.3	17	42.5	72	69.9	0.000[1]**
Written on professional prescription	6	9.5	3	7.5	9	8.7	0.852[1] ns
Written on prescriprion and lab paper	2	3.2	20	50.0	22	21.4	0.000[1]**
Written on unknow paper	7	9.0	37	88.1	44	36.7	0.000[1]**
Phone call DDS-DT	16	20.5	23	54.8	39	32.5	0.000[1]**
Phone call DDS-DT auxiliar	2	2.6	19	45.2	21	17.5	0.000[1]**
Phone call DDS auxiliar-DT	2	2.6	9	21.4	11	9.2	0.001[1]**
Phone call DDS auxiliar-DT auxiliar	-	-	3	7.1	3	2.5	0.041[2]*
Personally by DDS-DT	5	6.4	-	-	5	4.2	0.111[2] ns
Personally by DDS-DT auxiliar	1	1.3	1	2.4	2	1.7	0.579[2] ns
Personally by DDS auxiliar-DT	3	3.8	18	42.9	21	17.5	0.000[1]**
Personally by DDS auxiliar-DT auxiliar	-	-	1	2.4	1	0.8	0.350[2] ns
By email or fax	-	-	4	9.5	4	3.3	0.014[2]*
Without communication with the lab. Just send-the material	-	-	2	4.8	2	1.7	0.121[2] ns

The professionals were asked about how do they pack the material to be send to the dental laboratories, and the most frequent answer was in a plastic pack with 33,3% (n=26). The other results are shown in Table 3.

Regarding communication between the laboratory and office, it was asked about how is informed to prosthetic about the work to be done, and most of the time the lab needs to contact the DDS to ask questions about the work sent, which can be seen in Table 4.

DISCUSSION

Exploring the data found by Chi-square test, it´s noted male predominance in prosthetic group, while females are more frequent among dentists (p=0,000), demonstrating that women are dominating the dental market in this sample supporting Paranhos et al.[2] (2009) who found female predominance in 52% of DDS in different specialities and Palancha[3] (2009), who found the same in the DDS group (67,46%) and male predominance in the DT group (39,43%).

Still regarding the profile, it was noted that professionals concern to keep updated, since according to Fisher exact test, participation in courses and conferences once a year is more prevalent in DT group and the response once in semester was prevalent among DDS (p=0,001). This data is more encouraging than that found by Francesquini[4] (2004), who reports that 57% of the DDS didn´t participate in courses, lectures and/or

classes preferring to consult other DDS for possible errors (55%).

When material will be send to the laboratory, despite being packed with a description of the work to be done, DDS and DT don´t tell if and what procedures were adopted in order to disinfect them, showing a failed communication in the axis dental lab - dental office in relation to biosafety. Nevertheless, prosthetic technicians have a larger care on packing the material, with the Chi-square and Fisher exact tests showing significant association (p=0,000).

Even without informing the receiver, professionals were questioned whether any treatment was executed on the material to be sent, and the majority of the DDS ported to wash the mold with running water (n=44); fourteen use hypochlorite spray, ten do immersion in hypochlorite and eleven have no care with the material to be send. Similar values were reported by the DT, and seven confessed that don´t disinfected the molds – nor when they reach the lab, nor before sending to the office. These alarming data confront Silva et al.[5] (2010) which evaluated 25 dental technicians in the city of João Pessoa/PB by means of a questionnaire containing questions related with the knowledge of biosafety´s principles, disinfection of impressions and other items, and found that 96% of respondents believe that laboratory procedures can lead to contamination by an infectious disease. Nevertheless, when asked about implementation of disinfection in the work arriving the laboratory, 64% of professionals said they didn´t perform any disinfection procedure. One possible reason may be the fact that most respondents (96%) claim not to know any assistant that has been infected in the laboratory with infectious diseases.

Similar results were reported by Dourado et al.[6] (2003), who mentioned the risk of cross contamination between establishments due to the absence of a decontamination routine of molds and prosthetic pieces for most prosthesis specialists and technicians responsible for the laboratories. And when something is done, the solutions and methods used are not the recommended. Negligence and improper use of personal protection equipment by professionals were also verified.

Another factor to consider is the manipulation of dental material during storage. The literature[7] reports recontamination of this material after disinfected when arriving the lab, mainly due to lack of cabinets where they are stored, being the hands are the main route of microorganisms transmission.

Regarding communication between dental laboratory and dental office, Afsharzand

et al.[8] (2006) has stated that an appropriate and effective communication is essential for a successful restoration. The DT is the responsible for making prosthesis according to the specifications of the DDS, who, in turn, has the knowledge and authority to delegate laboratory procedures. So it´s up to the DDS the final design of the prosthesis, without seeking help from the lab.

The more information sent, higher rate of success the work will have and faster it will run, because there´s no need for additional communications about the work details[9].

In this study, it can be seen from the Chi-square and Fisher´s exact test statistically significant difference with respect to work submitted with written instructions in the lab ´s paper, and in the DDS prescription paper (most prevalent in dentists group) and transmitted via email or fax for the prosthetics group, which may be due to lack of information in relation to what is desired, leaving doubts.

Cited in the literature, a more complete and standardized form to request dental work for the dental lab would be the Authorization or Prescription of Work (PW), which is a legal document that contains written instructions to carry out the various laboratory procedures which provides a means of communication between the DDS and DT (9). As reported by Afsharzand et al.[10] (2006b), in fact this has been most common form used for communication between dental office and dental lab.

The information contained in the PW must contain the name and address of the laboratory and the DDS, signature, CRO number, patient identification, dispatch and delivery date, and specific instructions for the work[3].

Reeson and Jepson[11] (2005), states that, over time, the professional relationship between DDS and DTs has relied on the information written into PWs, without dialogue between them. Thus, the parts make assumptions about the approach to the patient, based on their own experience, resulting in inconsistent quality of service. On the other hand, the literature is unanimous in saying that communication between DDS and DTs by PW is crucial to a well executed dental prosthesis[10,12].

In various studies[13], DTs described a high incidence of bad impressions, incorrect dental preparations and inadequate bite records. In turn, Lynch and Allen[14] (2005) reported in their study conducted in UK and Ireland, with a sample of 241 questionnaires that more than a half of the cases were accompanied by little or no written instruction, and was necessary to contact the DDS in 14% of cases.

For the archiving of the material after the completion of the work, is confirmed by the Chi-square test that the filing of the material is more prevalent in the group of DDS (p=0,000) for an indefinite period, but wasn´t explained the reason, if for fear of a possible deal with the patient or applying knowledge of legislation, whatever the Civil Code or the Consumer Protection Code. This long period of custody is a subject of challenging consensus[1].

CONCLUSION

There isn´t a consensus in the literature regarding the use of documentation and communication protocols between the establishments studied. It becomes evident the need to rethink the importance of legal aspects that permeate the relationship between dental offices and dental laboratories.

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