Do dentists communicate well with dental technicians?

Are dentists sufficiently equipped to communicate effectively with dental laboratories – and do they? **Andrzej Juszczyk, Robert Clark** and **David Radford** from King's College London Dental Institute sought to find out.

Adapted from a *BDJ* article.¹

According to the GDC 'good dental care is delivered by a dental team',² a team which communicates effectively and shares its knowledge and skills with other team members. Dental laboratories are ideally placed to comment on effective communication among the dental team, so Chief Dental Technical Instructor Andrzej Juszczyk, Professor Robert Clark and Senior Lecturer David Radford decided to investigate attitudes and communication between dentist and dental technician from the technician's perspective. They invited 803 dental laboratories to complete a postal survey covering dental/lab communication and the dentist's understanding of technical procedures. This article describes their findings.

Learning to communicate

In *Developing the dental team*³ the GDC said that dental care professionals' (DCPs') education and training should require students to understand the importance of communication with other members of the dental team. In the earlier document *The first five years*⁴ (second edition) the GDC laid out the requirements for the content and delivery of the undergraduate

dental degree programme. Its key principles were:

- That dental students have significant and appropriate opportunities to work and train together with DCPs
- That they understand the principles and techniques that allow them to act as the leader of the dental team
- That they communicate effectively with the dental technician so that indirect restorations and fixed and removable prostheses can be constructed
- That students should have a sufficient understanding of the clinical preparation and laboratory processes so that they can appropriately evaluate their own clinical work and the work provided to and received from the dental technician.

However, dental undergraduate education in most UK dental schools is delivered independently to training programmes for DCPs, even though many of the programmes are taught in the same establishment, within close proximity to each other.

Technician education

Dental technician education is generally taught in specially equipped colleges not affiliated to the university dental schools. Student dental technicians take a foundation degree which covers the theoretical aspects and basic practical dental technology. Practical experience is gained in work placement laboratories where students produce appliances for patient treatments with minimal contact with clinics or dentists.

Currently there seems to be little provision to integrate education with dental undergraduates.

Understanding roles

Up until quite recently undergraduate dental students produced the technical work for a number of their own patient treatments. However, the requirement of The Medical Devices Directive (MDD)⁵ for custom made dental devices to be manufactured by suitably qualified personnel, registered with the

competent authority, has been interpreted in a way which prevents this.

Therefore, dental students send their technical work to dental laboratories, exactly mirroring the practice followed by qualified dentists. This process is consequently a necessary part of dental students' learning experience. One study stated that 'it is essential that the dentist and the dental technician work together effectively as a team. Each should have a sound understanding of the role of the other so that they can collaborate in an effective fashion'.⁶

Developments in dental undergraduate education in the UK have seen a significant decrease in the amount of hands-on dental technology. Students spend less time carrying out technical tasks and more time being told how to. If future dental education provides a reduced laboratory element for dentists then it is critical for the dental profession to create and maintain relations with dental technologists. The views and attitudes of dental technicians are directly relevant as they are stakeholders in the provision of dental care.

The survey

A postal questionnaire was compiled covering areas including registration of dental technicians and type of laboratory. Respondents were asked to gauge the effectiveness of communication and the understanding that their clients had of technical procedures. The questionnaire with a covering letter was sent to the 803 dental laboratories that make up the UK Dental Laboratories Association database.

The results

Forty percent of the laboratories responded to the survey. Fifty-two percent of respondents were registered with the GDC as of the end of January 2008. The remaining 48% needed to register before July 2008 in order to continue practising dental technology legally within the UK. Eighty-four percent of respondents

were laboratory owners and 13% were employed technicians.

The laboratories divided themselves into:

42% specialist crown and bridge laboratories; 31% specialist removable prosthesis laboratories; 37% general dental laboratories. Nine percent identified themselves as orthodontic labs. Sixteen percent of technicians were attached to dental practices and 82% were working in remote dental laboratories. Six percent acknowledged doing solely NHS work; 21% solely private work and 61% - the much larger percentage - a mixture of NHS and private work.

Communication

Most commonly, 87% of technicians communicated directly with the clinician conducting the treatment; 6% communicated via the lab manager and 9% with a practice manager. Seventy-nine percent communicated by telephone; 46% by laboratory prescription card and 35% by personal visit. Ten percent of technicians used email and other methods including fax and text messages. These results are shown in Figure 1. Ninety-two percent of respondents said their communication was welcomed;

78% said that it was encouraged and 87% confirmed that their suggestions were acted on (Fig. 2). However, there was a degree of contradiction with a significant minority (39%) saying that they were expected to just get on with it. Sixty-two percent had received blank prescriptions but the majority (64%) would seek guidance from the dentist before producing any appliance.

Newly qualified dentists

Respondents were asked how well they thought newly qualified dentists (1-3 years qualified) communicated with them, on a rising scale of 'poor' (0) to 'very good' (5). Over 50% gave a score of 3 and above. However, only 8% had very good communication and 44% gave scores of 2 and below. Respondents were also asked if communication with newly qualified dentists was worse or better than with established dental practitioners (qualified for over five years) on a rising scale from 'worse' (0) to 'better' (5). Fifty-percent of respondents gave a score of 3 and above; 50% with a score of 2 and below but only 5% gave a maximum score. Only 2% of newly qualified dentists were scored as having a very good understanding of dental technical procedures.

Individual views

Fifty-four percent of dental technicians working in a commercial laboratory did feel an integral part of the dental team, and provided positive comments such as:

Fig. 1 Percentage of respondents using different methods of communication

Fig. 2 Status of and response to communication

- 'As time moves on, I feel that dentists value dental technicians more and as the range of available products expands we need to know more to be able to give advice. Newly qualified surgeons are far more aware of newer products for them and the patients.'
- 'Things are improving. I feel like the status of the dental technician has risen but still has some way to go. All surgeries carry out staff training meetings now. Maybe the dental lab should be invited bi-monthly.'

Comments on communication included:

- 'Good communication between clinician and dental technician is **vital** if a good end result is to be achieved. This must continue to be taught and reinforced to undergraduate dentists.'
- 'All of my clients welcome communication and try to include me. This has improved over the years.'

However, other respondents commented that:

- 'The newly qualified dental graduates appear to have little or no knowledge of even the most basic laboratory procedures. The last five years have seen a noticeable decline. They are happy and willing to communicate, but that is often because they want guidance.'
- 'Much of technical dentistry is too complex for newly qualified practitioners to effectively *team lead*.'
- 'In the future the so called *team leaders* will probably be clinical dental technicians as they

will be the only members of the dental team with educational backgrounds in all facets of both clinical and technical skills.'

- 'Do any newly qualified dentists visit a commercial laboratory as part of the year of VT? Perhaps they should.'

'Good communication between clinician and dental technician is vital for a good end result.'

An unquestionable need

The need for effective communication between dentist and dental technician seems unquestionable. This is made even more important by the development of new and exciting techniques and materials for patient treatment and appliance construction. The communication referred to in this questionnaire is when further information is required by the dental technician, after the initial use of a patient prescription form. The use of prescription

cards to record what has been agreed offers a permanent, signed and traceable record of the patient's prescription as well as a method of auditing work being carried out. The use of a telephone in isolation without laboratory cards may lead to a breakdown in communication or even a degree of abuse. Parts of the survey were very positive with a large majority saying that their communication was welcomed, encouraged and that their suggestions were acted on. However, when assessing how effective dentists were at communicating technical instructions the dental technician's opinions changed markedly.

Not all of the returned questionnaires carried comments, however, there were in excess of 156 that did. The comments ranged from very laconic, less than ten words, to an expansive 500 words; from enthusiastic and positive, to depressingly negative and even paranoid. The majority gave a negative view of the dentist-laboratory interaction with the most common theme being that the laboratory is undervalued and a lack of dentist recognition of the laboratory's knowledge, experience and skill.

Conclusion

Within the limits of this work reported in the *British Dental Journal*¹ and based on the views of responding dental technicians, it can be concluded that the aims of the GDC as expressed in the second edition of *The first five years* have not been met with regard to:

- Effective communication between dentist and dental technician
- Newly qualified dentists do not have an appropriate understanding of dental technical techniques
- Dental schools do not sufficiently prepare dental undergraduate students to communicate with the dental laboratory.

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2. General Dental Council. *The principles of dental team working*. 2006.
3. General Dental Council. *Developing the dental team*. 2004.
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6. Davenport J C, Basker R M, Heath J R, Ralph J P *et al*. Communication between the dentist and the dental technician. *Br Dent J* 2000; **189**: 471-474.