

# Who is qualified to design?

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## IN BRIEF

- It is important to know where dental technicians' knowledge and experience fit into the dental team.
- Using the technician's experience to deliver different treatment plan options could help costs to the dentist and patient and avoid potential problems.
- Could some of the responsibilities for appliance design be altered or shared between the dentist and the technician?

Now that registration is in place for dental technicians, it is important to know where our experience and knowledge fit into the GDC dental team. Knowing one's position in that team will help it to become a well oiled machine and help us to produce what the patient wants, without costly mistakes. New materials and techniques often open different treatment plan options and using the technologist's experience will help with costs to the dentist and the patient, and avoid possible problems. I wanted to ask a few questions regarding the experience of dental technologists and the training of dental students, to see whether we could blend or share some of the responsibilities of some appliance designs.

I have been a dental technician (DT) for 25 years, I am registered and studying a Diploma in Professional Studies. I have worked in prosthetics, chrome-cobalt, orthodontics, crowns and bridges and implantology and I would consider myself well-read and very knowledgeable in most fields of dental technology. Unfortunately, I am having problems being told what to do by a minority of dentists.

I know that dentists are the prescribers of any appliance that is made for a patient, and that their prescriptions must be followed to the letter. I also know that they are the final arbiter of the quality, aesthetics and the fit of any finished appliance. I am more than willing to make anything that follows the ethics and fundamentals of partial denture design,<sup>1</sup> but I am unwilling to make something I know or believe to be essentially flawed.

## Teaching deficiencies

In a *British Dental Journal* (BDJ) article by Lynch and Allen,<sup>2</sup> I was shocked to read that over 46-50% of vocational

trainee (VT) dentists were unable to design a chrome-cobalt removable partial denture (CCRPD) correctly. It is also stated that 90% of VTs did not have access to a surveyor in their practice. If there is no surveyor in the practice, how can the VTs or even the regular dentists design anything correctly? This report even said that it had identified a group of dentists that thought that they did not need a surveyor to design a CCRPD.

Two-thirds of the VTs asked in this survey felt that fees received or charged for CCRPDs were a poor incentive to perform design procedures. I thought that under General Dental Council (GDC) guidelines, costs should not be a factor in designing appliances.

Another study by Lynch and Allen<sup>3</sup> looks at the teaching of removable partial dentures (RPDs) and identifies that the teaching of RPD design has not been standardised and that different dental schools teach different amounts and contents. One school taught two hours on the subject of surveying, yet another taught 28 hours. According to the authors, these variations are a reflection of the pressures on dental education and these differences in teaching practices will, I think, inevitably lead to confusion between dentists and their peers and the co-workers who provide for them.

A comment by Barsby<sup>4</sup> on the first Lynch and Allen paper<sup>2</sup> stated that

experience in dental schools is 'limited' and that Lynch and Allen have 'identified a deficiency' in vocational training. In fact, some VTs learnt less in their VT year than they did at dental school and some were even discouraged from prescribing CCRPDs by their mentors, claiming that it 'was not worth their while'.<sup>2</sup> The GDC requires dentists to be competent in this area.<sup>5</sup> How can dentists design CCRPDs or anything correctly, without the bare essentials of partial denture design like equipment, education and experience?

This has rocked me to the core, to think that some dentists are prescribing appliances without the key essentials and are unable to communicate some design details. Surveying needs to be done correctly to position clasps and eliminate undercuts that would interfere with the path of insertion. Davenport *et al.*<sup>6-8</sup> have written papers on surveying and a system of design and clasping. Could not these be incorporated into verifiable CPD papers for dentists and DTs alike? I think this would bring things into harmony and get both professions singing from the same GDC hymn sheet.

## Change the guidance

In the Medicines and Healthcare Products Regulatory Agency (MHRA) published guidance notes,<sup>9</sup> it quite clearly states '...in the manufacturing of a dental appliance, it is the dentist who

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undertakes the design of the product and the dental laboratory manufactures it to a predefined specification.' I think this should be re-worded to include a key essential: the dental technologist's input and knowledge.

Davenport *et al.*<sup>10</sup> state that communication between the dentist and the DT should be improved to provide the ideal prosthetic appliance. I agree with everything that these authors have to say, specifically '...it is essential that the dentist and the dental technician work together effectively as a team' and '...it is possible that the technician will still sometimes need additional information of clarification.' It seems that it is the DT who would be able to help the dentist here.

If a DT challenged a design slightly and could justify it by showing the evidence, ie survey lines and alternative designs, then surely that would be acceptable. I have spoken to some of the dentists that I work with and they are more than willing to let me 'tinker' with a design to make sure that it is done correctly. Some have even come down to the laboratory and watched me survey a case and I have explained the reason behind the denture base design. Some of the prescriptions that I have seen have been exquisitely designed, but some others have been as minimal as 'P/-'. This only reinforces the points that Lynch and Allen<sup>11</sup> make about the quality of written prescriptions.

Having the opportunity to work closely with my dentists gives some of them the opportunity to draw upon my experience manufacturing all types of appliances and gives me the clinical aspects of a treatment plan that I would not ordinarily see. It also gives me the chance to sit in on a treatment planning stage and be consulted on technical aspects of any case. We have avoided clasp problems and found alternative treatment options, we have even saved on clinical working time. When we have collaborated together, I feel that we have only increased the chance of a successful treatment plan. Judging by the aforementioned authors, I am not the only one who feels this way.

Therefore, in my opinion, a re-wording of the MHRA guidance notes<sup>9</sup> should read something like '...in the manufacturing of a dental appliance, it is the

dentist who undertakes the initial design of the product. The dental laboratory, if necessary, discusses and verifies the design and then manufactures it to the agreed specification.'

I feel this detracts nothing from the guidance notes and the dentist's initial design, but only enhances it. Getting a second opinion on a design would only improve the dentist's experience and increase their confidence when designing a CCRPD. Not only that, with newer denture base materials on the market, a totally different appliance could be designed and constructed.

Flexible and light cure denture base materials have been in the marketplace for a while now and designing needs to be re-thought, as some of the newer materials are not being taught in dental schools. Sales representatives try and sell these new materials to the laboratories, but have the design advantages and disadvantages been fully explained to the dentist? If there was a particular case that needed a unique solution, couldn't the DT advise the dentist about the new material and a possible alternative treatment plan?

## Collaboration is essential

I know the vast majority of dentists know what they are doing, are fully up to date with all the new techniques and materials and when asked, are willing to provide the reason 'why' behind a particular design. When the reason behind a design is explained, in the grander scheme of the treatment plan it will make perfect sense. Unfortunately, there is a minority of dentists who have the attitude 'just do it', 'I am responsible for this design' and 'this is what the patient wants'. When did the patient become more qualified than either the dentist or the dental technologist?

Dentists are usually approached by patients wanting something specific, for instance asking them to copy their old denture or give them their 'smile' back. Graham *et al.*<sup>12</sup> write that the dentist's decisions are influenced by the patient's needs. The patient wants to have their smile back and this would make them fit in and feel socially accepted. Designing something that is aesthetically pleasing might not be functional or tolerable. As

the evidence shows, 30-50% of patients never or only occasionally wear their denture and 'other negative impacts on physical function were the instability of the denture in the mouth (such as "flipping"), problems with speech...'<sup>12</sup>

Under the GDC guidelines,<sup>5,13</sup> anyone knowingly prescribing or making anything that they know they are not competent to do could be disciplined, prosecuted and possibly struck off. In the *Principles of dental team working*<sup>5</sup> section 4.9, it states that 'if you do not feel that what you have been asked to do is appropriate, discuss this with the colleague...' This reads to me, 'OK, let's sit down and talk about this, we'll find something that we can work with.' But as I have mentioned before, the 'just do it' mentality is difficult to get past. Do we report these individuals, possibly lose business and get a reputation for being difficult or even become 'black balled' by others?

I have talked to some friends and colleagues who are owners of dental laboratories and they have decided to have indemnity forms made up to cover them against prosecution. Some individuals are even taking out personal insurance. A few laboratories are willing to make appliances knowing that they are flawed, as long as they have informed the dentist about their concerns and the dentist is willing to sign the indemnity form. I wonder if this is legal and whether the forms would stand up in a court of law?

I know and understand the concerns of commercial laboratories and I know they do not want to turn away business. Single person laboratories find it even harder to liaise with dentists, let alone turn away their business. Some dentists might find a DT questioning a design as a sign of dissent and might even decide to find someone else to do their work. A few laboratories are also concerned that these dentists might discourage others from using their laboratory as they perceive them as 'a difficult bunch'. I know that doing something that you know is fundamentally flawed to appease a dentist is ethically wrong and could result in litigation later on. What are our options here, to work and pay our mortgages or to stand on our new soap box and start quoting GDC guidelines to dentists who should already know them?

## Protecting the public

I am under the impression that the GDC is there to protect the public's interests, eradicating the bad apples and getting the whole dental team qualified and working in unison to provide the patient with the best treatment possible. I hope that this is true, as I do agree with this principle. Striving to become the best and provide the best is what I've always aspired to. I am worried that now statutory registration is in force and the DT has been included in the dental team, we will still be marginalised by some dentists and have our expertise and experience ignored.

I have written a letter along similar lines to the GDC and their response has quoted the same guidelines that I have cited in this article. My concerns are to do with the wording of the MHRA guidance note 10<sup>9</sup> and the wording of the GDC guideline section 4.9<sup>5</sup> and the confusion that they cause. I have read the GDC guidelines two or three times from cover to cover and some of the answers are there, but not all. As I have said, we are talking about the minority of dentists and some of that minority feature

on the back pages of the *GDC Gazette* every month. I am dreading the day when a DT's name appears there, when all he has done is to follow what the dentist has told him to do.

Why are some dentists not asking for, or willing to take advice of help from people in dentistry who are just as competent, experienced and in some instances, more qualified than they are in this particular field? I wanted to find out who is more qualified to design and recommend designs for construction when some of the tools are missing, ie equipment, education and experience. Lynch and Allen<sup>2,11</sup> state that some VT dentists have ceded the design of CCRPDs to the DT, as some faced difficulties when fabricating prostheses. Under the new guidelines, can clinical dental technicians, who have clients referred to them, alter designs without consulting the dentist? Comparing competency, experience and knowledge of this particular field, it would seem on paper that the DT would be more qualified.

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