Interview: “Technology leads to better dentistry”

By Dental Tribune MEA/CAPPmea

During the 11th CAD/CAM & Digital Dentistry Int’l Conference, which recently took place on 06-07 May 2016 at Jumeirah Beach Hotel in Dubai, Dental Tribune MEA had the pleasure of interviewing several international experts about the latest dental technologies. The organizer, CAPP, had gathered together an impressive scientific lineup consisting of renowned international speakers, so we managed to ask the same questions to some of them. Let’s compare their different opinions.

Dental Tribune MEA/CAPPmea: Have digital solutions changed the way dentists are performing nowadays?

Dr. Eduardo Mahn, Chile: In my opinion, the answer is both yes and no. Certain methods work much better now, especially with the help of digital technology and CAD/CAM technologies, as these have become standardized protocols whilst other methods remain unchanged due to technological and mechanical restrictions. Digital solutions have not necessarily improved the way dentists work directly. We all still need to perform a lot of the steps by ourselves anyway, for example we are the ones who prepare the teeth we need to cement using restorations made by CAD/CAM machines.

Prof. Jan-Frederik Guth, Germany: Digital solutions have not revolutionized but evolved dentistry. It is an ongoing process.

Asst. Prof. Dr. Cagdas Kiskaloglu, Turkey: Digital solutions help us in every way. They allow us to work faster and more efficiently, and give us the ability to foresee everything. Digital solutions have become an important part of our daily life and this trend will continue to grow in the future. In my opinion, every dentist will have to use digital dental solutions sooner rather than later.

Dr. Michael Dieter, Switzerland: Yes, digital technologies have definitely had a great impact on dentistry. I first came into contact with digital dentistry in 1998 when I became very fascinated by CAD/CAM systems that had just been launched at the time. Now, eight years later, the technology has already been tested through real life situations and it is no longer considered a future technology, but rather a standard practice. Digital solutions have not changed the principles of dentistry. They have more to do with the way we work as dentists, bringing more predictability and analyzing 3D datasets, using analytic tools that offer us more than just CAD/CAM dentistry. This is what makes it more valuable. I believe digital solutions have not revolutionized but evolved dentistry. It is an ongoing process.

Dr. Jan Paulics, Denmark: Actually, if you view dentistry from a new perspective, not seeing the clinic and the dentist as separate, but seeing everything combined in a complete workflow. So instead of simply taking the patient in and taking care of them, you start at the beginning by digitizing everything. When someone comes into the clinic we first scan the patient, then we sit together and go through everything that is happening in their mouth. From there on, we can plan the treatment together. In this way the patient is fully involved and there is no need to sell the treatment to them — they will be the ones to ask for it instead.

Prof. Jihad Abdallah, Lebanon: Well, digital dentistry was something I had been looking for that I found in CBCT. I thought it would be great to use in the field of implant dentistry. When the patient comes into the office and you have a CBCT machine, you can easily find the data you need to plan and execute the case. Sometimes you need to do CBCT during surgical planning in very complex cases. Only when we received the CBCT machine in the office, did we understand the power of digital dentistry. The technology also allowed me to take it a step further by acquiring an intraoral camera and a milling machine.

Do you think that digital dentistry is the future of dentistry?

Prof. Jan-Frederik Guth, Germany: Absolutley. What is happening at the moment is that we have what I call “different islan solutions” in digital dentistry: intraoral scanning, face scanning, digital articulators, everything is now connected together so we can put bridges between all those islands. This is where development takes part. If one day this connection happens to become complete, digital dentistry will make even more sense because its value will increase.

Prof. Jihad Abdallah, Lebanon: Yes, the development of digital dentistry will give more prospects for different in-office treatments and dentists will be able to offer better treatments to their patients.

Michele Temperani, CDF, Italy: Technology is a good thing and it is something that can’t be stopped. Eventually, most of the work will be done by machines but the handcraft of dental technicians will always be the best. What might happen is that dental technicians would do high quality work using their own hands, which would come to be considered of the highest value and probably not many people would be able to afford it.

What are the advantages of digital dentistry?

Dr. Eduardo Mahn, Chile: The main advantage of digital dentistry is that machines are accurate and can...
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do repeated work. For example, if you need to redo a crown because it broke, you can keep the same prep, press “Play” and you receive exactly the same crown.

Dr. Tif Qureshi, UK: The advantage of digital dentistry is that you have the ability to predict where you are going to go, to control things. So, the orthodontists could be very easy to lose control of the inclusion if you weren’t able to see where the teeth were going to move to. When we know where the teeth are going to move to we can then plan our anterior guidance, canine lateral guidance and we can make sure that the patients are functioning not only as well but potentially even better after the orthodontic treatment. The digital step forward we have had in orthodontics has been enormous. The other thing we are able to do with digital dentistry is that we can actually start to preview the shape of required teeth. Sometimes it is hard to understand but when you have teeth that are crooked they tend to be wide and bulbous. When teeth have been straightened and put in the full arch they need to be slightly arrowed and having seen this digitally all upfront, dentists have much better guidance how to shape correctly to get a much better result.

Are there any limitations of digital dentistry?

Dr. Eduardo Mahn, Chile: Machines still do not complete the entire work process. They can create a crown but you still need to polish it, glaze it and give it definition. The software and the database of patients’ teeth do not automatically create a beautiful smile so there is still the need of a human touch.

Prof. Jan-Frederik Güth, Germany: I think they vary, depending on the individual system you use and whether it is open or closed. For example, full arch intraoral scans are still very dependent on how you scan them and whether you need powder or not. We must be aware of the specific technology and look for treatment concepts to use with it.

Dr. Tif Qureshi, UK: Yes, definitely, there should be limitations in orthodontics. Something that’s very important and that we teach is to make sure that GP dentists start at first with very limited cases. They should be primarily working in the anterior teeth only. If the teeth require movement in the back of the mouth, that should be treated by an orthodontist, unless the dentist has a huge matter of experience. So, with Inman Aligner and Clear Aligner and with everything we teach in the IAS Academy, we are making sure that the dentists are focusing on the front region and only treating minor tooth movement, if at all.

Dr. Michael Dieter, Switzerland: Frankly, I do not see any limitations in general. Currently, the question is rather how many dentists are using digital technology specifically when they need to go into a big investment. This applies for both dentists and dental technicians. The fact that there are different systems, open and closed, can be seen a limitation. In my opinion, the bigger problem are the investments. Also, the systems should be a little bit adjusted so that dentists can work with different software and hardware manufacturers.