In this interview, Dr Simon Kold explains how he and his wife and co-surgeon, Dr Louise Kold, implemented a digital workflow in their practice and talks about the lessons they learnt from it.

Dr Kold, could you please tell us a little bit about yourself and the main steps in your journey to a digital workflow?

In 2002, I began working at the Herning Implant Center, which was founded by my parents back in the 1970s. In 2005, we began working with Nobel Biocare’s Teeth-In-An-Hour concept, which was our first opportunity to perform CAD/CAM-guided surgery. We found out that Nobel Biocare’s prosthetically driven implant placement offered a lot of benefits: not only could we position implants well, but we could often make surgery easier for both dentist and patient too.

Over the past few years, we have learnt that we can place implants more precisely if the procedure is guided. That’s why we began using intraoral scanning in 2011 to be able to combine surface scanning with CBCT imaging to make guide stents. Of course, correct implant placement is essential for long-term stability, which, in turn, reduces the likelihood of implant failure.

Looking back at your journey, what recommendations would you give someone who wants to invest more in digital technology and workflows?

I would say that the top thing you have to do is to bring your staff into the mix, because you will not be able to do this on your own and still be productive. It has to be a team-based digital workflow. Really, that is the most important thing. The rest will just follow.

“You would never be able to do something freehand with as much precision as you can when it’s guided, so using a digital workflow has made it easier for us to deliver predictable prosthetic work.”

What do you see as the benefits and the challenges of a digital workflow, and how have your staff reacted and adapted to this approach?

“In short, digital integration allows us to conduct treatments in very little time with very predictable results.”
One of the biggest challenges was spending a lot more time on virtual planning. However, we wanted to spend the same amount of time in the clinic as we did prior to the digital workflow integration. Louise and I decided to divide the workflow into two areas: things that only we could do, such as virtual planning and the actual surgeries, and the rest, which we could leave to our assistants.

In practice, this means that, if a patient spends two hours at our clinic for a standard implant treatment, Louise and I will only see the patient for 15 to 20 minutes. The rest of our time is spent concentrating on virtual planning, while our team focuses on patient care. For example, one assistant communicates with the patient, while another handles the scans and yet another produces the guides. This way, the patient always feels that we have time for him or her, and Louise and I can spend much more time in the treatment planning phase.

In addition, our staff have responded very positively because they are a lot more involved in scanning and producing guides than before. This responsibility makes work not just more fun but more productive as well.

Since August 2018, you have been working with the new X-Guide system, which now shares a connection with DTX Studio suite. What are your experiences with that system so far? The possibility of combining X-Guide with DTX Studio suite has only just become a reality for us. X-Guide is a tremendous system that allows us to take on complex cases and create advanced treatments through a new type of digital workflow. It is an amazing tool that provides real-time feedback during surgery, so the surgeon can pinpoint anatomical landmarks such as the mandibular inferior nerve or the sinus floor location, even when performing flapless surgery.

Combining X-Guide and DTX Studio suite enables us to do virtual planning and then export the plan to X-Guide, so the system bypasses the need for guide stents and models. For example, we can plan implants for partially edentulous patients, export the planning to X-Guide and prefabricate provisional teeth at the same time—everything is model-free. In a way it is like working freehand when placing implants. There are close to no limits in patient selection. We have been able to treat simple flapless cases, patients with limited mouth opening, patients with the need for soft- and hard-tissue augmentation, and patients where flapless surgery is the best option.

And best of all, it is fun! Recently, we started to host regular courses for dentists from abroad, and we are able to perform five or six live surgeries in one day. Everything is guided, everything is pre-planned, including prostheses, and we still have time to provide about four hours of lectures. In short, digital integration allows us to conduct treatments in very little time with very predictable results.

Where do you see digital dentistry heading in the next few years? I think that we are finally in a position where, most of the time, it will be easier to do guided rather than non-guided treatment. I think there will be an increased demand from patients, as well as from referring dentists, for implant placement to be guided and that there will be a big increase in digitally planned treatments.

What other benefits of digital dentistry do you see, especially for the patient? A key part of our philosophy is that the time to teeth should be as short as possible. Whenever a patient comes in with a tooth that must be extracted, we want a new tooth to be in there as soon as possible. Our experience is that the patient will be more satisfied, and more likely to want implant treatment in the future, if the tooth is replaced immediately. The amazing part of working with digital workflows is that many provisionals can be prefabricated, even for very complex cases, like cases with multiple extractions or using the All-on-4 treatment concept.

Thank you very much for this interview.